

**RIVERS STATE UNIVERSITY,
PORT HARCOURT**

**MAN AND VOCATION,
THE INSEPARABLE TWINS:
THE VOCATIONALIST AND CONSTRUCTION
COST ANALYST'S PERSPECTIVE.**

*AN
INAUGURAL LECTURE*

BY

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PROFESSOR OF INDUSTRIAL TECHNOLOGY EDUCATION

SERIES NO. 82

Wednesday, 30th November, 2022.

DEDICATION

This Inaugural Lecture is dedicated to Jehovah God My Refuge and Strength. You are worthy, Jehovah our God, to receive the glory and the honour, and the power, because you created all things and because of your will they came into existence and were created.

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PROTOCOL

The Vice Chancellor

The Pro-Chancellor and Members of the Governing Council Rivers State University

Deputy Vice Chancellor (Administration)

Deputy Vice Chancellor (Academics)

Registrar and other Principal Staff of the University

Former Vice Chancellors and Emeritus Professors

Provost of the College of Medical Sciences

Dean of Post Graduate School

Deans of Faculties and Directors

The Pro-Chancellor and Chairman Governing Council of the University of Port Harcourt, Choba.

Distinguished Professors and Scholars

Heads of Departments

Your Royal Majesties, Highnesses and Chiefs

Chiefs and Representatives of Omuobizu Village and Uvuawhu Clan

Staff and Students of Rivers State University

BOT, EXCO and Members of GSS Emohua Old Students Alumni Association

Gentlemen of the Press

Ladies and Gentlemen

1. PREAMBLE

Vice Chancellor Sir, I am extremely delighted and honoured by the privilege you gave to me to give this inaugural lecture which is the first (1st) in the Department of Vocational and Technology Education, the 11th in the Faculty of Education and the 82nd in this Rivers State University. It then means that I am not doing anything that is new in this university and new to my esteemed audience made up of intellectuals, eminent and respected scholars. Sir, I am very grateful to you and your leadership style, because I feel greatly humbled by this great privilege of being addressed as a **Professor of Industrial Technology Education**. From my personal observations and understanding, a professor is supposed to be humble, approachable and an accommodating scholar. This is because a professor's special knowledge is limited to his own area of specialty. Even in his specialty there may be much he is yet to know. So he is largely ignorant in other fields of study and hence a continuous learner. A professor should be ready to learn from the people he meets on daily basis as well as from his students (Gabriel, 2016). Despite the fact that I am a professor in the Department of Vocational and Technology Education, my knowledge and specialization is only narrowed to building technology. Therefore my fellow professors, since we have attained our academic apogee, please let us use it to help our society and also assist others who have not attained this amiable position in the academics.

Vice Chancellor Sir, all my academic as well as professional achievements must be attributed to Jehovah's underserved kindness to me and His unquantifiable love for me. Consequently, I must concur with the wise King Solomon who said that we should use the value of our higher education to praise the Grand Creator, being Jehovah God. Really if we refuse to honour and acknowledge Him in all our ways, it means that the value of our higher education will be futile and chasing after the wind.

Vice Chancellor Sir, as an intelligent and a school loving boy, I was enrolled

into primary school immediately after Nigeria and Biafra war. Today I must give glory to God, that I am privileged to stand before this mammoth audience made up of men and women of academic repute as a Professor to deliver an inaugural lecture. This actually attests to the fact that academic race is marathon indeed. The ones who started the race first, may not be the first to cross the finishing line. The Holy Bible also confirms that at times, the fastest may not win the race.

Ecl 9: 11, says, I have seen something further under the sun, that the swift do not always win the race, nor do the mighty win the battle,.....nor the intelligent always have the riches, nor do those with knowledge always have success, because time and unforeseen occurrence befall them all.

According to the **Template for Rivers State University Inaugural lectures (2022) presented by her Senate lectures Committee**, it states among other things that;

- Inaugural lecture is an occasion for newly promoted professors to inform the University community and the public about their areas of specialization, recent and future research.
- It is an avenue to identify and close knowledge gaps using research knowledge acquired to solve the problem.
- Also, a professor who has not presented an inaugural lecture cannot deliver a valedictory lecture.

In line with the above statement, Sodiki (2022) in his 73rd inaugural lecture in Rivers State University delivered on 26th January, 2022, also indicated two (2) areas a lecturer can focus his attention when delivering lecture.

1. To focus on the professor's own work within the general framework of his discipline.
2. To focus on any general topic where the professor considers that he has something fresh and stimulating to tell his audience.

Vice Chancellor Sir, my lecture today will make use of both Nos. 1 and 2,

with introductory concept of the discipline of my research area, that is, Technical Vocational Education and Training (TVET), historical background of TVET, some useful theories relevant to TVET, contributions of TVET and its value in re-shaping the society. This lecture will also address the issue of using TVET as a panacea to solve some of the societal problems plaguing our society and other related TVET issues. It will also include the contributions I have made to scholarship and my contributions to physical development of building structures.

Vice Chancellor Sir, Please, permit me to pay tributes to the professors from the Faculty of Education who have presented their inaugural lectures in this University. The first inaugural lecture from the Faculty of Education was delivered by Prof. Mrs. Osa C. Tawari in 2002, followed by Prof. Macson J. Ahiakwo (2006), Prof. Mrs. Justina W. Georgewill (2006), Prof. Wey A. Amaewhule (2007), Prof. Maureen N. Koko (2015), Prof. Nnamdi S. Okoroma (2017), Prof. Jane I. Alamina (2018), Prof. Blessing E. Ahiauzu (2020), Prof. Margaret E. Akpomi (2021) and finally, Prof. William J. Ubulom (2022), the 10th inaugural lecturer from Faculty of Education. I wholeheartedly salute you all for your courage and bold steps in paying your professorial dues which all professors owe the University.

It is also noteworthy to observe that many great men in Nigeria such as Late Moshood Abiola, Late Chief Obafemi Awolowo, former President Olusegun Obasanjo and former President Goodluck, Ebele Jonathan that all of them faced challenges during their earlier stages in life. Their life stories prove that hard-works must come before pleasure. Such noble men of our country, passed through many hardships and thorns during their primary and secondary school periods before becoming great men in Nigeria. *Not everyone was born with silver spoon in his mouth.* It also an irrefutable fact that some of the eminent professors, erudite scholars and respected listeners sitting in this hall today had faced hardships at their various stages in life before becoming what they are today. Really, the *beautiful and good smelling Rose Flower comes out of thorns.* This indicates that **money may,**

or may not be a barrier to one's educational pursuits provided the person in this academic race is resolute to reach the finishing point of the race.

The August lecturer standing before you today had a similar life story to tell. There were **ups and downs** in my race to acquire higher education but to the glory of Jehovah God all lost grounds in this race were later filled up and today I stand before you all as a professor having reached the academic zenith.

Vice Chancellor Sir, I owe an immense gratitude to you and to the Chairman and members of Senate Lectures Committee for giving me this **opportunity** which came out of blues to give this inaugural lecture. It is a rare privilege and opportunity because going by the Senate Lectures Committee schedule; the gaps have been filled from January 2022- 2030. I have been wondering when it will be my turn to give this noble and remarkable lecture before I retire as a professor. Fortunately, for me a window of opportunity opened up for me and I was informed two months (September 2022) ago that vacancy exists in the month of November 2022, I immediately made use of this golden opportunity through the backing and supports from my beloved wife Dr. (Mrs.) Chidinma Isaac Dokubo who is also a Senior lecturer in this University. Truly, apart from the help of Almighty God who is the **Greatest Worker** in the whole universe and the self sacrificing supports of my wife and children, this lecture should not have been a success today. Consequently, I must echo the biblical statement made at **Rev 4:11** “**You are worthy, Jehovah our God, to receive the glory and the honour, and the power, because you created all things and because of your will they came into existence and were created**”

My distinguished colleagues and highly valued listeners, it is an irrefutable fact that to choose a topic for an inaugural lecture is not so easy. Hence, my choice of topic may be intriguing to many in the audience because my beloved and beautiful wife is a twin. Nevertheless, the choice of my lecture topic is congruent on the fact that to work is part and parcel of man. Hence, the topic; **Man and Vocation, the inseparable twins: The Vocationalist and Construction Cost Analyst's Perspective.**

Furthermore, my link with vocational and technology activities began in 1984 when I got admission to study Quantity Surveying in then Rivers State University of Science and Technology, Nkpolu – Oroworukwo, Port Harcourt (Now Rivers State University). Initially, my intention was to be a medical Doctor because of my brilliant academic performances in Government Secondary Emohua. My dream was not realized simply because of the notion and dreads that the cost of training a medical student was astronomically high and beyond the reach of an ordinary man. Nevertheless, I do not regret not being a medical doctor today, because I belong to a Noble Profession as a Quantity Surveyor and also as a Vocationalist. I am also glad today that in the field of medical profession, I have giants like Prof. Chituru G. Orluwene, the Provost, College of Medical Sciences of this Great University. He was one of my loyal and obedient boys that time in GSS EMOHUA when I was their **Pioneer Senior Prefect** but today, I am happy that he is no more a boy but an important public figure in Nigeria. My beloved Prof, I owe you an immense gratitude because of your loyalty and humility as well as being a *Shining Star* in your medical profession.

Vice Chancellor Sir, Vocational and Technology education Programme has all it takes to redirect man to vocational skills acquisition which is man's Twin brother and also assist RSU to achieve its cardinal objective, **EXCELLENCE and CREATIVITY.**

2. INTRODUCTION

Vice Chancellor sir, permit me to say that as a Professor of Industrial Technology Education, that I regard education as a marathon race and not as one hundred (100) metre race. Today I am a man of many facets; a vocationalist, a registered and licensed Quantity Surveyor, an Administrator of Education, an entrepreneur and a Registered Teacher. All my academic as well as professional achievements must be credited to Jehovah's protection, because He is the Epitome of knowledge, wisdom and understanding.

Man and Vocation, the inseparable twins: The Vocationalist and Construction Cost Analyst's Perspective . Proofs from Nature abound which show that man is a twin brother of vocation. Really, man and vocation are joined together by nature. For the purpose of clarity, some concepts or terminologies need to be explained because my audience is made up of people from all different walks of life. Who are twins? (Twins are two offspring produced by the same pregnancy and from the same womb. The term **man** is just a '**human being**' and in this inaugural lecture it includes **male** and **female**. For instance in the University of Port Harcourt inaugural lecture series No.78 delivered by Didia, in September 1st 2011 titled: '**Man know Thy self**'. The lecturer defined man as just a human being made up of male and female. He also stated that man belongs to a kingdom of animal called vertebrates. Even if man hates to be addressed as an animal, he is really an animal of the highest order because of his endowed large brain as shown in plate 1 below. Really, man's large brain distinguishes him from other lower animals (Didia, 2011).

Furthermore, the term **vocation**, refers to a person's employment or occupation especially regarded as worthy and requiring dedication to duty, or a man's trade, or profession. On the other hand the term *vocationalist* refers to a person who emphasizes the importance of vocational training in education and a construction cost analyst simply refers to a construction cost engineer or a quantity surveyor. Hence, Man and Vocation, as inseparable

twins, will be treated in the eye or perspective of a vocationalist and a construction cost analyst.

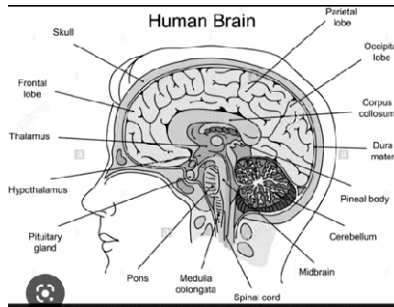


Plate 1:

This plate 1 shows that the endowed large brain in man distinguishes him from other lower animals.

Source: Alamy stock photo

The grand Creator of man has endowed in man with **Cognitive** and **psychomotor domains** that make vocation to be intrinsic in man. Psychomotor domain helps man to use his legs and hands to learn, acquire skills and physically performs the skills that he has learnt. When God created the first man, he immediately assigned him work to do. From the reliable records of creation as shown at Gen 1:28 and Gen 2:15, man was given the assignment to cultivate and care for the earth and this is the origin of Vocational Agricultural Education. In addition, before the deluge of Noah's day, God also helped Noah and his family to engage in technical and vocational activities relating to the ones performed by our present day wood technologists, marine engineers, carpenters and petroleum engineers (Gen 6:15- 16). They were commissioned to build huge ark (ship) by using choice wood and to coat the ships with bitumen as waterproof membrane. The above activity also involved the function of a construction cost analyst or a Quantity

Surveyor because specification writing was involved. The specifications were: the type of timber to be used, length, width and height of the proposed construction work. The specification also involved the use of bitumen as waterproof membrane to coat the ark (ship).



Plate 2: Little children learning technical skills while playing with sand (Source: jw.org)

Vice chancellor Sir, the plate 2 above shows that from cradle to old age, man starts to learn how to develop and acquire skills. For instance, a little boy will insist that his parents buy him toys which will be used to build vehicles, houses and also use sand to build other vocational related items. On the other hand, the little girls will occupy themselves in learning how to prepare food with mere sand, toys will be used to plait hairs and others will learn how to tie their baby toys at their backs. The little kids are doing these works because the ability and the desire to do works are in built in man.



Plate 3:

Plate 3 shows that from cradle to old age man continues to work and this process can only stop if man dies and goes to his grave.

This process of man and vocation moving *pari-passu* continues even if a man retires from his active service and that is why we have a lot of retirees have engaged themselves in one job or the other. No wonder **Ecl 9:10 says that “Whatever your hand finds to do, do it with all your might, for there is no work in the grave, where you are going”**. Hence all those who do not want to work should quickly meet lower creatures like ants for instructions and tutorials on how to be diligent, productive and creative. It is also a true statement that neither God nor any corporate organization will like an indolent person. Consequently, it is pertinent to note and observe an irrefutable rule of vocation which is: ***He who does not want to work should not eat (2 Thess 3: 10)***.

3. HISTORICAL BACKGROUND OF TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET).

Nwafor, (2009) opined that, before the advent of western education, our traditional education encouraged the development of a child's physical and mental skills. It was aimed at developing a self-reliant adult who can manage well his daily circumstances. He further showed that acquisition of a specific vocational training and development of healthy attitudes toward honest labour were included in the oral pedagogy of the traditional education which our forefathers had before the introduction of Western education in Nigeria. Further, traditional education system also provides opportunities for the young learners to acquire knowledge and skills in the local crafts available in the communities. The teachers in this case were the master craftsmen and women. The local crafts and trades included carpentry, weaving, blacksmithing, basket-making, net making, boat making, sculpturing and so on. In most cases, an individual may acquire more than one of these trades, while his main occupations is either farming or fishing.



Plate 4: Local Crafts in Traditional Education

Plate 4 shows that traditional system of education provided opportunities for people to acquire knowledge and skills in the local crafts available in the communities. Nevertheless, modern Vocational and Technical Education dates far back when Nigeria came in contact with the foreign merchandise and also missionaries. Nigeria at that time did not accord this type of education the needed attention it required. The common method of vocational and technical education then was through apprenticeship, handicrafts and others. Most of the curricula of early Western Educators were based on producing graduates mostly for white collar jobs. Gradually vocational education started gaining grounds because it provides its learner to be an industrialist, employer of labour and a self-reliant person whose outputs could contribute to the country's economy and her Gross Domestic Product (GDP). In addition, urgent need arose for the improvement of the technical and vocational education because, if we produce graduates of **General Education** only, we cannot survive on that since we need the drivers, carpenters, plumbers, electricians and others for the nation to keep functioning properly.

In the late 19th century, a variety of groups in the United States began to advocate for the creation of new vocational-education programs in schools, reflecting the then widespread belief in the moral, educative and practical value of work. Many supporters of vocational education, including businessmen and labour unions, saw it as a solution to problems of skilled-labour shortages and unemployment in a rapidly industrializing society. Employers hoped it would weaken the power of labour unions over the training of industrial workers, whereas saw it as an opportunity for individual advancement and as a means of dignifying labour itself. Many philanthropists and moral reformers regarded vocational training as an opportunity to inculcate the moral value of work, which they feared was being eroded by modern society. In the early 20th century, supporters of vocational education began to advocate more systematic programs and to emphasize its economic and utilitarian values more forcefully. Business groups, for example, began to argue that American economic progress and global competitiveness demanded public funding of trade instruction. In 1905 the Massachusetts state legislature appointed the Massachusetts Commission on Industrial and Technical Education, also known as the Douglas Commission, which recommended in its final report that the state expands technical and industrial training. In 1906 they formed the National Society for the Promotion of Industrial Education (NSPIE) to lobby on behalf of vocational education and to coordinate the efforts of supporting groups, including the American Federation of Labor, the National Association of Manufacturers, the National Education Association, and social welfare reformers. Furthermore, **Smith- Hughes Act**, also known as **National Vocational Education Act**, which was adopted by the U.S. legislation in 1917 contributed immensely to the development of technical and vocational education globally. That Act helped for the provision of federal aids to the states for the purpose of promoting vocational education in agricultural and industrial trades and in home economics. Later, the congressionally appointed Commission on National Aid to Vocational Education declared

that national vocational education was an urgent necessity. Vocational training, it argued, would vitalize general education and democratize schooling by adapting it to the real needs of children, promote industrial efficiency and national prosperity, decrease labour and social unrest, and promote a higher standard of living for workers. It recommended federal grants to the states to promote vocational education, with particular focus on training vocational teachers.

As one of the first federal grant-in-aid programs, the Smith-Hughes Act provided federal aid on a matching basis to states and established requirements regarding how the money was to be used. It created the Federal Board of Vocational Education to oversee the distribution of funds and approve state plans. The act required every participating state to designate or create a state-level body that would act as a liaison between the federal board and local districts; it thereby augmented the power of state governments at a time when they were beginning to expand their oversight of local schools in new ways. Although much of the advocacy had centred on industrial education, Congress included agriculture and home economics within its definition of vocational subjects. States and localities were permitted to decide for themselves whether vocational education should be provided in separate schools or within existing public schools. Vocational education not only separated students by gender but also sorted them into tracks that tended to reinforce the differential treatment of students based on class and race. African American students, for example, were often steered into vocational education programs on the assumption that they were not capable of academic training or would not be hired for jobs that required it. Historians have also pointed out that the programs helped to spread the ideology of “vocationalism,” the view that the curriculum should be guided by economic priorities and values. Hence, the findings of the Douglas Commission were embraced by a diverse group of reformers who promoted vocational education at local, state, and national levels.

4. BASIC CONCEPTS OF TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET)

The Concept of Technical and Vocational Education and Training

According to UNESCO and the International Labor Organization (ILO), TVET refers to “aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life” (UNESCO and ILO, 2001). From the foregoing, TVET refers to a variety of learning skills which are applicable to the world of work. The learning practices may occur in a diversity of learning environments, including educational institutions and occupational place.

TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET) PROPERLY EXPLAINED

Technical and vocational education and Training (TVET) comprises the following; Technical education, Vocational education, Technical training and Vocational training.

Technical education: This refers to the academic and vocational preparations of students for jobs involving applied science and modern technology. Some of the subject areas are entrepreneurship, automotive technicians, carpentry, agriculture etc. It facilitates the acquisition of practical and applied skills as well as basic scientific knowledge.

Vocational education: This is an aspect of education that prepares people to work as technicians or help them take up employment as skilled craftsmen, tradesmen or artisans.

Technical Training: This aspect of education teaches the skills needed to design, develop, implement, maintain and support a particular technology or

related application and service.

Vocational Training: Refers to instructional programmes or causes that focus on the skills required for a particular job function or trade. This fields of training is focused on helping individuals develop the skills necessary for employment.

In addition, TVET also refers to conscious involvement to bring about knowledge which would make people more industrious in designated areas of economic activity. This is the distinctive principle of TVET. It is imperative that TVET be conducted according to general social norms so that people in general should be treated with respect and dignity by the institutions since these programmes are dispensed in public and private educational establishments.

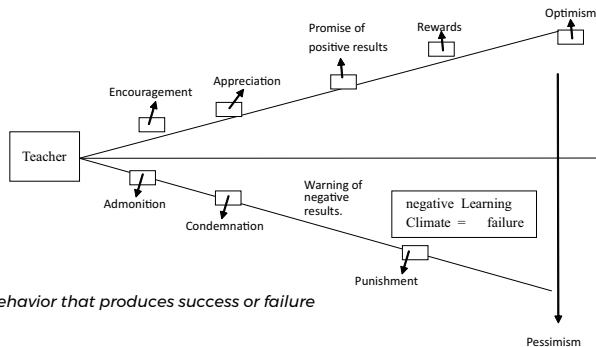


Figure 1.
Teacher's behavior that produces success or failure

Source: NDE, Master's Trainers Hand Book

Vice Chancellor Sir, the figure 1 above indicates that a teacher's behavior towards the students definitely affects their learning outcomes either positively or negatively. Hence, all lecturers are expected to undergo training in Faculty of Education in order to acquire proper teaching skills. We should remember that it is only in education production industry that the **raw material is man, production machine is man and finished product is also man**. Consequently specialized methodology will be required in order to get

the right finished products (**Graduates**) at the end of teaching activities. For that reason, it is important to facilitate learning by establishing an atmosphere conducive to learning from the beginning of the training. This is done by developing a relationship that is based on the mutual respect with the trainees, accepting the trainees as peers and behaving towards them accordingly and setting realistic objectives for the training. If right attitudes are not exhibited by the teachers towards the learners, the figure above shows that the resultant effects will produce negative products (**graduates**).

The National Policy on education (2013), incorporates Tertiary Technology Education as important programmes to be offered in Universities, Polytechnics, Monotechnics and Colleges of Education (Technical) and other specialized institutions. The specific goals of Technology Education at the tertiary level shall be to:

- a. Provide courses of instruction and training in engineering, other technologies, applied science, business and management, leading to the production of trained manpower;
 - b. Provide the technical knowledge and skills necessary for agricultural, industrial, commercial and economic development of Nigeria.
 - c. Give training that imparts the necessary skills for the production of technicians, technologists and other skilled personnel who shall be enterprising and self-reliant.
 - d. Train people who can apply scientific knowledge to solve environmental problems for the convenience of man.
- In pursuance of these goals, Government shall:
- a. Adopt measures to develop and encourage the ideals of technology education through students' exposure to practical industrial work experience.
 - b. Improve immediate and long-term prospects of graduates of technology institutions and other professionals with respect to their

- status and remuneration and
- c. Encourage Technology Education institutions to conduct applied research relevant to the needs and aspirations of the nation.
Provide technologically based skill training that ensures students understand how their expertise fits into improving the society and fulfilling national goals.
 - d. Acquire entrepreneurial skills.
 - e. Provide training that enables students to acquire specialized industrial skills that empower them to compete globally.

This means that some invaluable objectives of TVET are concerned with the development and survival of both the individual and society at large. In fact it is a tool through which social, economic and political development could be achieved, if it is properly planned, Funded and implemented (Osuala, 2010). TVET is invaluable because, it provide the following benefits; provision of meaningful education for youth which could make them self-reliance and subsequently encourage them to drive profit and be self independent. It will also provide graduates with the training and supports necessary to help them establish careers in any skill and chosen profession. This programme will provide graduates with training skills that will make them meet the manpower needs of the society. In addition, stimulation of industrial and economic growths of rural and less developed areas will be achieved.

From the above objectives, it is evident that this type of education if it is given all it deserves and properly implemented will produce quality graduates that will be entrepreneurs to foster job creation and reduce or eliminate poverty in Nigeria, hence recover and sustain the economy globally. This could be realized when the graduates .e self-reliant by establishing their own business small medium scale enterprises. If job creation are enhance, employment opportunities will increase and individuals can be viable contribute significantly to the development of the national economy. This will also enhance economy viability, sustainability and recovery.

Technical and vocational education and training (TVET) has been an integral part of national development strategies in many societies because of its impact on productivity and economic development. It is a type of education that offers skills and opportunities for individuals to be self-reliant and contribute meaningfully to the economic sustainability of that nation. Through this, TVET graduates are capable of reviving and sustained any economy even in a recessed situation as it is in Nigeria today. This is achievable only when its graduates are qualitatively and quantitatively trained with the right facilities, complete content of the curriculum and in line with societal demands/expectations; industrial based standards which will ultimately made them entrepreneurs and job creators with these skills and standard of training acquired. It is very sure that the national economy can be sustained and recovered. TVET skills such as welding and fabrication, electrical installation, piping and fitting, metal works etc are embodiments of TVET and as such, capable to recovered and sustained the economy. Despite its contributions, Nigerians have not given this aspect of education the attention it deserves and that is one of the reasons for the nation's under development. This is proved by the number of the graduates being produced yearly by tertiary institutions and many of them roam the street searching for jobs instead of creating jobs by themselves because of lack of technical skills.



PLATE: 5. Construction of a high rise building with basement..

Plate 5 indicates the Construction of a high rise building with basement and the construction cost analysts are always involved in any physical development of building structures. This is on the site training helps the vocational and technology students to acquire the needed skills in building technology. In any skill vocational development, the contributions of a construction cost engineer cannot be overemphasized. This is because he must be involved in specification writing, cost estimation of the proposed work, estimation of the labour to be used, materials and other preliminary works that will be involved in the construction works. For example, in Rivers State University, all the massive projects going on in different campuses today must involve the inputs of construction cost analysts or a Quantity Surveyor. Therefore, since the inaugural lecturer is vocationalist and a certified quantity surveyor, it then means that every item to be considered today will be done from the perspective of a vocationalist and a construction cost analyst.



PLATE 6: Block laying in action

Students of Vocational and Technology Education are constantly exposed to building construction sequences and skills.

It is important to note that Rivers State University has complied with tenet of National Policy on Education by establishing the Departments of Vocational and Technology Education and the newly established faculty of entrepreneurial studies. For instance the Department of Vocational and Technology Education is housing two programmes leading to the award of:

(I) Bachelor of Science (B.Sc) in Agricultural Education and

(ii) Bachelor of (B.Sc) in Technical Education with option in Building Technology, Electrical/ Electronic Technology and Mechanical Technology.

The undergraduate programmes are designed to provide fundamental knowledge and to deepen the students' grasp of Vocational and Technology Education. The programmes are intended to expose students to the techniques and tools of research and also develop in them the spirit of inquisition and generally prepare them to face challenges and solve problems in the field of Vocational and Technology Education in particular and Education in general.

On the other hand, Technical Education Programme of this department has major options: **Building Technology, Electrical/Electronic Technology and Mechanical Technology**. The Philosophy of the programme is to develop sustainable human resource developers in Technical Education who are practically oriented and who will teach with a sense of motivating individuals towards broad-based technological development in Nigeria and the globe.

Areas of specialization in Technical and Vocation Education at sub-tertiary level

At the sub-degree level, TVET prepares students for the following trades:

Block laying, concrete works, Carpentry works, Automobile mechanics, Ceramics productions, Hair dressing/barbing salon, Leather works/shoe making, Fashion designs/tailoring services, Catering services, Fishery/aquaculture, Plumbing works, Detergents/soap making, Concrete designs, Automobile driving, Out boat engine mechanics, Tilling works, Painting and decorating work, Computer services, Arts/graphics, etc. Looking at immeasurable values of acquiring technical skills, I therefore plead that man must acquire a technical skill in order to make his life comfortable.

According to Dokubo (2017), Technical and vocational education and training (TVET) also refers to education and training that prepares people for

gainful employment and makes them more productive in various economic fields. It is apparent that TVET plays an important role for social and economic development and sustainability of citizens. It is also capable of recovering a recessed economy. In other words, TVET according to Okwelle (2013) refers to deliberate interventions to bring about learning which would make people more productive (in designated areas of economic activity. TVE1 has the potential to enhance human capabilities and enlarge peoples' choices. Technical education is the training of technical\oriented personnel who are to be the initiators, facilitators and implementers of technological development of a nation by adequately training its citizenry on the need to be technologically literate, leading to self-reliance and sustainability. Technical education places more roles than any other profession because it has more direct impact on national economy. Its contributions are widespread and visible ranging from metalwork technology, mechanical/automobile technology, electrical and electronic technology, building and woodwork technology etc. Consequently it also serves as change agents not only for technical systems but also for many other societal changes.

5. SOME TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET) THEORIES THAT CAN STIMULATE EFFICIENCY IN MAN

Scientific theory by F. W. Taylor (1949)

5.1. McGregor theories of X and Y (1960).

Scientific theory by F. W. Taylor (1949)

McGregor (1960) theories X and Y.

The scientific management theory was first introduced by F. W. Taylor in 1949, hence he has been known as the father of scientific management theory.

Taylor was worried about the low efficiency in industrial establishments, as the industrial revolution of the 19th century had brought along with it socioeconomic changes that led to inefficiency in industry. He began consistent attack on prevailing production management problems. He argued passionately for the use of incentive wage system as a way of getting more output from the workers. Taylor also believed that workers could always exert greater efforts if they are paid some financial incentives based on the number of units of work they are able to produce. He believed that standards could be developed and efficiency improved, and so conducted series of studies on operations and operators. In the first study, Taylor identified and studied the relevant variables in the metal cutting process, thus introducing us to operations oriented analysis. In his research on the movement of iron casting from one place to another, Taylor viewed the operator as an extension of the machine, and suggested that lower cost could be achieved by giving the operator an incentive for increasing his output. He also suggested that lower cost could be achieved by improving the way work was done.

Consequently, Taylor's work had shown the need for monetary incentives to be provided to workers in industries as a means of motivating them to produce their maximum efficiency, effectiveness and productivity. On the other hand, such provisions will greatly empower them economically and also make them have the pride of their vocation. Hence, when people are economically empowered, they could be more industrious.

MCGREGOR THEORY OF X AND Y (1960)

For instance McGregor (1960) Theory X states that the average human being has an inherent dislike for work and will avoid it if he can. Because of this human characteristic of dislike for work, most people must be coerced, controlled, directed, and threatened with punishment to get them to put forth adequate effort toward the achievement of organizational objectives.

The average human being prefers to be directed, wishes to avoid responsibility, has little ambition and wants security above all. Therefore, this theory assumed that people are passive and resistant to organizational goals and must be coerced, directed, commanded and controlled if the organization must achieve its objective. On the other hand, theory Y assumes that:

The average human being does not inherently dislike work. Depending upon controllable conditions, work may be a source of satisfaction or a source of punishment. External control and the threat of punishment are not the only means for bringing about effort towards the organizational objectives to which he is committed. Commitment to an objective is a function of the rewards associated with their achievements. The average human being learns, under proper conditions, not only to accept but to seek responsibility. The capacity to exercise a relatively high degree of imagination, ingenuity and creativity in the solution of organizational problems is widely inherent in man. Under the conditions of modern industrial life, the intellectual potentialities of the average human can reach its optimum level if an atmosphere that is conducive is put in place in an industry.

Therefore, from the foregoing, people are not by nature passive. Man was created by GOD to have pleasures and satisfaction in all his hard works according to the wise man, King Solomon of the Bible. Also, men are not naturally resistant to organizational goals. If they are, it is as a result of their experiences in the organization. Threats of punishment are not the only means of bringing effort toward organizational objectives. Man will exercise self-direction and self-control to achieve objectives to which he is committed. Industrial education programmes should therefore, create such a climate that encourages maximum commitment to the organizational objectives.

6. THE INESTIMABLE VALUES OF VOCATIONAL AND TECHNOLOGY EDUCATION PROGRAMS: PANACEA TO MOST OF OUR SOCIETAL PROBLEMS

The wonderful accomplishments of vocational and technical education in every sphere of human society cannot be over-stressed. Vocational and Technical education has greatly increased man's knowledge of the universe around him. This knowledge has opened up astoundingly new and improved ways of discovering and treating the societal problems that are inherent in Nigeria. Technological advancements in the field of electrical and electronics have ushered in the computer age. These advances have rapidly added positive results to peoples' lives for better living. It is therefore proper that the skills that have widened the knowledge of the world around us from minute things to the very large ones be passed on to the younger generation. If job creations are enhanced, employment opportunities will increase and individuals can be viable and contribute significantly to the development of the national economy.

Education is a process of training designed to give knowledge, develop skills and abilities that could lead to the development of mental alertness and the right attitude to life. This implies that if education is adequately inculcated in human-kind, individuals would meaningfully help themselves and positively contribute to the growth and welfare of their immediate community (Okoye & Okwelle, 2013). The Nigerian educational system with its emphasis on traditional job-based workplace is failing her graduates' entry into the rapidly changing 21st century world-of-work. This is apparent as education today in Nigeria is tailored and patterned after certification for white collar jobs, hence leaving graduates in search of jobs. This situation is characterized by high graduates unemployment. The unemployment rate in Nigeria has risen over the years. In essence, education still remains the single factor that guarantees both individual growth and national development. Thus, if an individual acquires a skill and the right attitude and realistically apply the

skills and right attitude for the benefit of the society, the economy of the society will be increased Argumentatively, the transformation from theory to value oriented form of education appears to be only viable with TVET, the education whose aims and objectives hinged on knowledge, acquisition of skills, value and product for economy recovery and sustainability in a recessed nation. Nigeria.

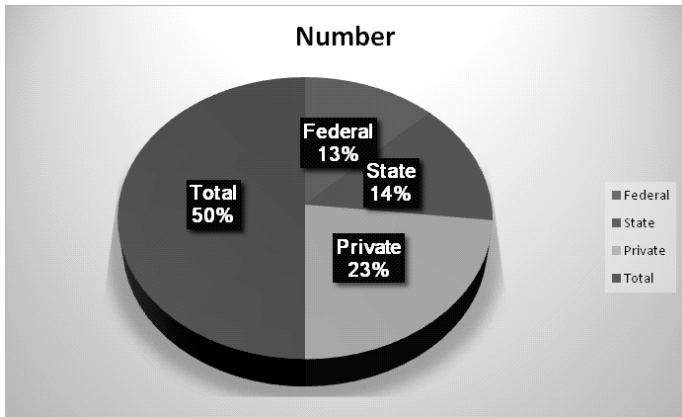


Figure 2:

No. of Universities in Nigeria by ownership in 2021 (Source: <https://universitygist.com>)

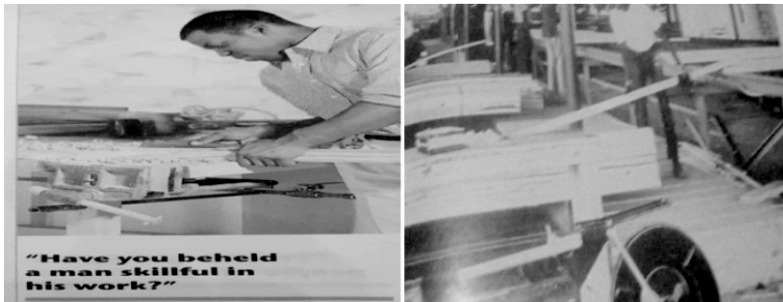
Available statistics shows that the number of **undergraduates** in these universities is about one million, eight hundred thousand students (**1.8M**) and out of this number, 44% of them are females. This record also indicates that we have **242,000** as **post graduates students and** out of this number, **females** have **38%** of the total number of the Post Graduate students. In this year, 2022 JAMB also registered a total of (1.8M) One million, eight hundred thousand candidates for 2022/2023 UTME (Source: **vanguardngr.com**).

Vice Chancellor Sir, it is only Vocational and Technology Education that we will be able to inculcate Vocational skills into this millions that are turned out

from various tertiary institutions annually in Nigeria. This also throws in more lights why these graduates are taught vocational skills in their various NYSC camps all over the Nations. This is because vocational education is generally practice-oriented both in principles and practice and it has the objective of making people more self-reliant and skillful, whether as self-employed or employed by someone else. Dokubo, (2018) shows that vocational education is the ability to use one's skills advantageously and display one's cerebral and economic prospect well sufficiently to be able to him undertake very effectively many of the economic predicaments confronting individuals and the nation as a whole. The state of affairs where many able-bodied men and women in the society are not gainfully employed in a country will surely lead to many social vices and negative behaviours as a result of effects of unemployment.

Dokubo and Elem (2017) also shows that a great number of people in this region are worried due to many years of abject poverty, inadequate social amenities and lack of employment opportunity in the oil and gas industry in their region. As a result of these ugly situations, many of the youths have resorted to anti-social activities as alternative means of livelihood which should not have happened if appropriate technical skills were inculcated into these jobless youths.

Vice Chancellor Sir, permit me to inform respected audience that, self-reliance is the ability of an individual in society to engage in productive activities for their personal survival and that of the nation at large. To ensure self-reliance there must be an appreciable level of technological development that will open way for scientific approach to problem solving and production. Hence, technological development is the transformation of society into a technological culture. It entails the acceptance of scientific and technological values and the local production and utilization of technological instruments and equipment and also the domestication of transfer of knowledge on self-reliance as a product of technological development in the individual as a result of skill acquisition.



Source: jw.org

Plate 7: This plate shows a Self-Reliant and Skillful Man doing his job. This skill can help man to be self-employed or become an employer of Labour.

The acquisition of these proficiencies helps the individuals involved to be suitably developed and be fitted into the community in which they belong. Another important area in which vocational education programme contributes to the rural transformation is that it provides trained manpower in applied science, technology and commerce, particularly at such professional levels and gives training's that impart the necessary skills leading to the production of enterprising men and women. It also helps the technicians and other skilled personnel to become successful entrepreneurs and at the same time enable them to be self-reliant (Amaewhule, 2014).

7. MAN FINALLY REMEMBERS HIS TWIN: --VOCATION

7.1 Rivers State Government and steps taken to refocus man's attention toward acquisition of vocational skills

Vice Chancellor Sir, it is gratifying to note that man's attention has gradually been redirected to the acquisition of technical and entrepreneurial skills. For instance, Rivers State Government and Local Government Areas in Rivers State have established various kinds of vocational training centers with the

cardinal objective of refocusing man's attention towards doing meaningful work for a living. In Rivers State Nigeria, the lecturer observed that the Local Government Areas in the State have built some vocational skills training centres which will help in reducing the rate of youth unemployment and at the same time alleviate the poverty level of the rural dwellers'. These vocational training centres can be clearly seen in each of the 23 Local Government Area of Rivers State. Hence, Technical and vocational education and training (TVET) is an integral part of national development strategies in many societies because of its impact on productivity and economic development. It is a type of education that offers skills and opportunities for individuals to be self-reliant and contribute meaningfully to the economic sustainability of that nation

Source:https://www.nigeriabusinessweb.com/search_state-rivers-training_center-33-11-932.html

7.2 Rivers State University, Nkpolu -Oroworukwo Port Harcourt and steps taken to redirect man's attention towards acquisition of vocational skills

In the same vein, recently, in order to refocus the attention of man from acquiring general education only, which at times ends in securing white collar jobs, the Senate of Rivers State University Nkpolu-Oroworukwo, Port Harcourt in her wisdom approved the establishment of the Faculty of Entrepreneurial Studies. This new faculty in addition to the existing department of Vocational and Technology Education of this University will help the learners to acquire necessary skills that will ultimately help them to appreciate the dignity of vocation and the resultant benefits of hard work. In addition, the compulsory introduction of entrepreneurship courses in all the faculties in this University is an eloquent testimony that man has finally re-directed his attention to vocational skills acquisition.



Plate 8: Technology Education Demonstration Workshop

Plate 8 shows Technology Education Demonstration Workshop which is the power house of vocational skills training of our Department. This workshop if properly equipped will surely contribute greatly to the internally generated revenue (IGR) of this University.



Plate 9:

This plate shows the fabrication of window protectors, hand rails, metal doors and other metal works. Wood items and cabinets are also produced from this workshop.



Plate 10

The above plate shows the Cutting/ Fabrication table that is used for fabrication works.



Plate 11:

This plate shows Workshop Technologists performing and showing their skill. These skilled men constitutes the manpower of this workshop.

7.3 Federal Government of Nigeria and steps taken to redirect man to vocational skills training.

Vice Chancellor Sir, it is pertinent to note that the Federal Government of

Nigeria had taken some measures to redirect man to vocational skills training. One they have done this is by directing the attention of the young learners to the acquisition of vocational and technical skills at their early stages in life. In realizing this, the National Council on Education (NCE 2005) approved a new basic education curriculum for Primary and Junior Secondary Schools in Nigeria to include Basic Technology for Junior Secondary School 1-3. Hence, the Nigeria Education and Research and Development Council (NERDC) revised the existing Primary and Junior Secondary School curricula to include Basic Technology. The new curricula will help the students to appreciate the fields of Vocational and Technical Education because it contains some topics such as; Career prospects and opportunities in technology — entrepreneurship, production of clay, ceramics and glass, production of plastics and rubber, woodworking machines, production of wood and metal, simple wood projects, metalwork machines, metal work processes and projects, simple electrical wiring, foundation of buildings, walls and floors, doors, windows and roof etc.

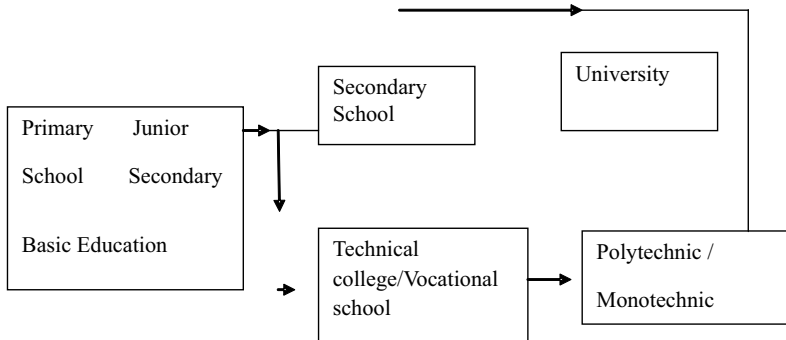


Figure 3:

The above shows Basic Education routes to Vocational and Technology Education.

The above diagram will help children at the basic education level to choose the direction they will follow to acquire technical and vocational skills either from the university, from the polytechnics or technical colleges of education.

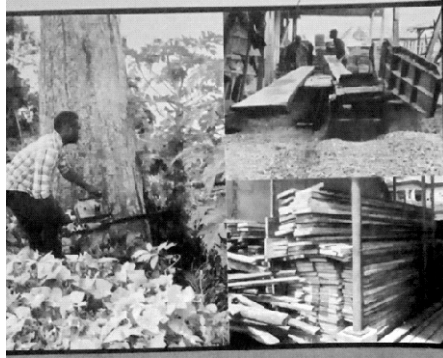


Plate 12. This table shows the cutting of timber and timber processing in action.



Plate 13: Furniture making is a useful skill that our youths can engage meaningfully.

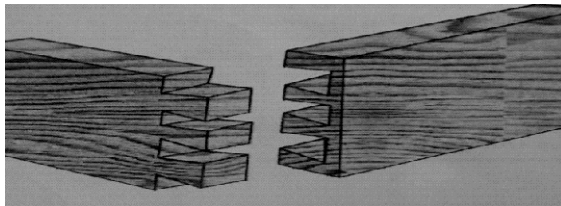


Plate 14 : Tongue and groove joint

Cutting of timber and wood processing are in action as shown in plates 12, 13 and 14 above. This indicates that Millions of unemployed youths can meaningfully engage themselves into wood production and processing.

Therefore, the inclusion of the technical and vocational topics in Basic Technology for Junior Secondary School has clearly shown that Nigeria has re-directed the attention of man to his Twin brother by making it compulsory that such learning contents should be inculcated to our young ones. Therefore, if we start early to refocus the attention of our young ones to the need of acquiring technical skills, it will surely help them in future to see work as an enjoyable task rather than a punishment. It is evident as I mentioned early in this lecture that man learns from infancy the need to acquire technical skills until he grows old.

My esteemed Professors and eminent scholars, it is worthy to note that Government in its broad elocution in the National Policy on Education as source for curriculum goals, said that one of the goal includes;

'giving the child the opportunity to develop and manipulate skills that will enable him to function effectively in society within the limits of his capabilities and also provide basic tools for further educational advancement including preparing him for trades and crafts in his locality'

To realize these objectives for skill acquisition purposes as the only means to meet the set goals, government has been able to implement to a certain level this policy. Basically a country's livelihood depends on how well the living condition of her people is, because, for people to be described as living well it is a function of how able they are in tapping and utilizing their natural resources (NPE, 2013). To tap these resources there is need for the needed skills to be acquired to facilitate the exploitation of these natural and human resources. In line with that, Nigeria, through its development agenda, seeks to help each region in the country to achieve sustainable peace and tranquility by training the needed work skills through technical and vocational education programmes (Dokubo, 2019).

Vice Chancellor Sir, it is important to note that in order to achieve the feat of skills acquisition, Nigerian Government has put in place various

programmes to facilitate the refocusing of man to the acquisition of meaningful skills and vocation. These needed skills which will engender self-reliance in man. Some of the agencies include the government educational institutions, government established parastatals, companies and private workshops etc. Furthermore, the Federal Government of Nigeria in realizing the importance of skill acquisition and in meeting national goals for education which emphasize the need for the country to be strong and self-reliant has entrenched in the National Policy on Education (2013) Vocational and Technical Education. These noble programmes will surely promote employment opportunities, economic progress, environmental and social development in Nigeria and in turn contribute positively to the improvement of the living conditions of the rural dwellers in Nigeria.

Table 1: Nigeria-unemployment rate 2012-2021

Year	Unemployment rate
2012	3.74%
2013	3.7%
2014	4.56%
2015	4.31%
2016	7.06%
2017	8.39%
2018	8.46%
2019	8.53%
2020	9.71%
2021	9.7%

Source:<https://www.statistics.com/statistics/382366/unemployment-rate-in-nigeria>

Table 1 above shows the unemployment rate in Nigeria. In order to redirect the attention of man towards Vocation and as well to reduce unemployment rate as shown above, the Federal Government of Nigeria has also emphasized

the need to establish various forms of organizations whose cardinal point is to inculcate vocational skills to millions Nigeria, in order for them to be self reliant and at the same time contribute greatly to the national economy. One of the agencies is the National Directorate of Employment (NDE). The National Directorate of Employment (NDE) was formed by the Federal Government of Nigeria in 1986 to address the issues of millions of youths that were unemployed, three quarters of whom were secondary school leavers (NDE 1988). The Federal Government was aware of the potential danger which an army of unemployed youths could pose to the nation. The federal government decided to address the situation by the introduction of the NDE. NDE has therefore articulated strategies capable of creating opportunities for self-employment and income generation for graduates.

The general aims of NDE include; to create self-employment awareness among graduates of tertiary institutions and to inculcate in the beneficiaries the dignity of labour and spirit of enterprise as against the notion of white collar jobs. This will assist the graduates to identify and seize opportunities to effectively combine the means of production for employment and wealth creation. This will help to provide business start-up programmes to enable the unemployed graduates establish and successfully run their business.

The lecturer also discovered that other agencies created by the government to acquire different trades necessary for the employability of the youth are;

National Open Apprenticeship scheme (NOAS). This agency has in the past trained Youths and also assisted them to establish and run profitable small scale enterprises throughout Nigeria by means of the **school-on- wheel** (SOW) scheme which made use of **well-equipped vocational mobile workshops** to train youths in the rural areas. The NYSC also receives the Entrepreneurship Development Programme (EDP) provided by the NDE at orientation camps in all the states and Abuja. In NYSC orientation camps Nation Wide, the corpsers are taught the need to acquire Vocational Skills which will help them to be self reliant, employers of labour and help them not to be perpetual seekers of employment after their national service coupled

with the adverse effects of our dwindling economy.

7.4 The Global attention to vocational skills acquisition.

The Vice Chancellor sir, the entire globe today is refocusing their attention on acquisition of vocational skills and inculcating same to their citizens. Hence, there is an urgent awareness among policy makers in many African countries today and the international community about the critical role that Technical and Vocational Educational and Training (TVET) can play in national development. According to African Union, the increasing importance that African governments now attach to TVET is reflected in the various Poverty Reduction Strategy Papers that governments have developed in collaboration with the World Bank. One of the most important features of TVET is its orientation towards the world of work and the emphasis of the curriculum on the acquisition of employable skills. TVET delivery systems are therefore well placed to train the skilled and entrepreneurial workforce that Africa needs to create wealth and emerge out of poverty (AU, 2012). The ultimate objective of SIFA is to minimize the gaps between demand and supply of skills within countries and in the continent.

Skills Initiative for Africa (SIFA) To Held Capacity Building On Skills For Trade And Economic Diversification

In order to refocus man's attention to practical works, the International Labour Organization (ILO) has provided a lot of Support programmes for Skills acquisition for Africa. The International Labour Organization (ILO) under the Skills Initiative for Africa (SIFA) Programme, hosted a capacity-building workshop on Skills for Trade and Economic Diversification (STED) between the 4th and 8th of April 2022. The workshop was set to draw participants from Zambia, Eswatini, Zimbabwe, Ghana and The United Republic of Tanzania. The Skills Initiative for Africa (SIFA) is a Programme of the African Union Commission (AUC) and the African Union Development Agency (AUDA-NEPAD) supported by the German Government and European Union and has partnered with the International

Labour Organization (ILO) to build the capacity of member states on anticipation of current and future labour market skills needs. The training focused on STED, an ILO sector-based methodology for identifying the skills current and future skill needs required to guide formation of skills development strategies that can aid countries to build more resilient productive and competitive sectors in the context of global open markets. The workshop contributed to the promotion of relevant and integrated skills development, as a way to keep up with the rapidly changing and complex labour markets.

The main objective of the workshop was to build the capacity of key labour market actors to analyse and anticipate skill needs in sectors that have the potential to increase employment opportunities, trade and which can contribute to economic diversification. At the end of the training, the participants to the training were helped to acquire a constructive method for identifying emerging skill needs and understanding the outlook skills gaps in export-oriented sectors with growth potential.

SIFA is a Programme of the African Union Commission (AUC) and the African Union Development Agency (AUDA NEPAD) supported by the German Government and European Union seeks to contribute toward the AU's agenda for a more prosperous Africa whose development is people-driven, relying on the potential of African people.

Source:<http://www.ilo.org/africa/media-centre/pr/WCMS840873/lang-en/index.htm>

Another programme is the Continental Programme of the African Union Commission (AUC) and the African Union Development Agency (AUDA), financed by the European Union and the German Government. This programme was developed because of high unemployment rate in Africa as a Continent. The high number of youth not in education employment or training, and the estimated 95 million of youth in sub-Saharan Africa who are uneducated, unemployed or engaged in precarious jobs represent a serious

challenge for African decision makers and practitioners. The African Union (AU) adopted a set of strategies addressing the medium and long-term aspirations and needs for a more prosperous Africa, notably, the Agenda 2063, the African Youth Charter (2006), the Continental education strategy for Africa (CESA 2016-2025), the Continental TVET Strategy (2014).

This programme was initiated by AU and ILO in order to close skills gap for green jobs underway in Ghana.

BUSINESS & FINANCE



Plate: 15. Skills Initiative for Africa Project (Ghana Project)

Source: <http://www.ilo.org/africa/technicalcooperation/WCMS-761440/lang-en/index.htm>

A week-long workshop is underway in Akosombo to equip various sector leaders with the knowledge that will close the skills gap for green jobs toward preserving and restoring the environment.

The Union, through its Skills Initiative for Africa (SIFA), with support from the ILO is seeking to equip technical and vocational institutions to train the youth to take up environmentally friendly employment. Delivering an address to open the workshop on Monday, September 26, 2022, the Country Director of ILO Office for Nigeria, Ghana, Liberia and Sierra Leone and Liaison Office for ECOWAS, Vanessa Phala said she is happy to be

participating in this all-important session that seeks to strengthen the capacities of ILO constituents in Skills Anticipation for Green Jobs. In terms of skill set for green jobs in Ghana they are really now catching up with it seriously and that is why they organized that workshop so that they could give some capacity building to the various industry stakeholders in order for them to understand what is required to develop more green-oriented skill jobs across the various sectors.

That workshop in Ghana covered broadly on all relevant sectors. It focused on the three priority sectors for a green economy in Ghana: renewable energy, forestry, and agriculture and as identified in Ghana's NDCs. It was built on the existing national strategies and projects of ILO, UNESCO, and UNDP to strengthen the capacity of the major stakeholders to support continuous skills development-related measures for the transition to a sustainable economy.

The Skills Anticipation component interventions aim to enhance the capacity of public and private institutions and key stakeholders in AUC Member States to effectively apply knowledge, technical skills, strategies and instruments to address the challenge of mismatch and imbalance of skills demand and supply across the African Continent. It is an established fact that countries that have succeeded in linking skills to productivity gains, increased employment and enhanced development have targeted skills development policies towards matching supply to demand for skills. Experience has also shown that building and sustaining competencies for future labour market needs and helping workers and enterprises adjust to changes in the labour market requires stronger skills anticipation and matching capacities and systems.

Against this background, the African Union (AU) has adopted a set of strategies to address the problem. Notable among them are the Agenda 2063, the African Youth Charter (2006); the Continental education strategy for Africa (CESA 2016-2025); the Continental TVET Strategy (2014); and an initiative to boost education, technology and innovation (C10) Championing Education, Science and Technology. Within this context, the Skills Initiative

for Africa (SIFA), a Project of the African Union Commission (AUC) and the African Union Development Agency (AUDA-NEPAD) supported by the German Government and European Union seeks to contribute toward the AU's agenda for a more prosperous Africa. Under the EU-funded SIFA component on Skills for Youth Employability (SYEP), the AU is collaborating with the International Labour Organization (ILO) to implement Skills Anticipation capacity development interventions for the selected AU Member States

In addition, recently, the global awareness of this unique type of education has moved the entire world being represented by the United Nations, at its General Assembly in November 2014, to declare every **15th July as World Youth Skills Day**. The United Nations General Assembly adopted by consensus, a resolution, spearheaded by Sri Lanka, declaring 15th July as the World Youth Skills Day. Sri Lanka initiated this resolution, with the assistance of the G77 & China, to highlight at a global level, the importance of youth skills development. World Skills day is a part of a global recognition and promotion of skills. UNESCO's theme for the 2019 Youth Skills Day is "**Learning to learn for life and work**". The UN designated day seeks to generate greater awareness of and discussion on the importance of technical, vocational education, and training and the development of other skills relevant to both local and global economies. It is hoped that it will contribute to reducing unemployment and underemployment among the youth across the globe. It also highlights youth skills development to draw attention to the critical need for marketable skills. World Youth Skills Day supports the importance of vocational and technical education as powerful means of sustaining youth development. The goal is to achieve better socio-economic conditions for today's youth, including as a means of addressing the challenges of unemployment and underemployment. It also shows how important skills are in achieving economic growth and personal success. Inspiring, educating, and developing youth is an integral part of the objectives of vocational and technical education.

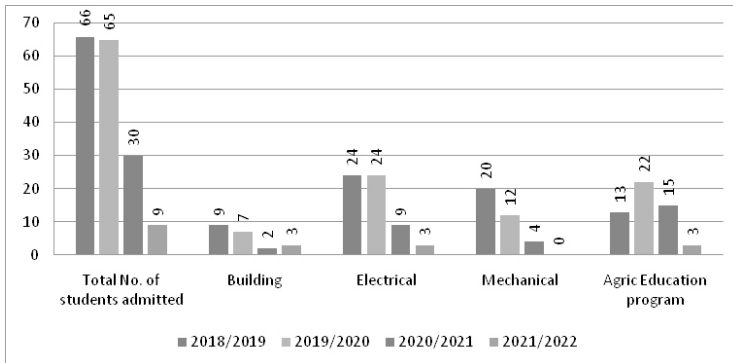
In addition, the world's giant economies known as developed countries have embraced the tenets of TVET because it is obvious that it is a tool that will be used to help man realize the important of his Twin called Vocation. It is apparent that developed countries of the world today such as Japan, Korea, Germany, Singapore, China, India, Canada, Australia etc have attained a tremendous height through huge investment in TVET. These positive impacts on national economy attest to the fact that TVET can have the capacity for sustainable economic recovery if its graduates are formidably built with the right skills as entrepreneurs. They have all ripped the benefits that are attached to the acquisition of Vocational skills and consequently became global leaders in all aspect of their enterprises.

Truly, throughout the whole world, the attention of man has been redirected to his Twin brother, (**Vocation**) through the acquisition of technical and vocational skills for the sustainable youth empowerment and economic growth. Man can achieve this through proper implementation of effective and reliable technical vocational education and training programmes.

8.0 PROBLEMS FACING TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING

Generally, vocational education programmes are being regarded by some people in negative perspectives. TVET is perceived by the general public as non-formal education training mainly for dullards, students with low academic proficiency and those that cannot make it in other major discipline. Hence, TVET is now seen as the last option of programme to choose during admission programmes. It is generally regarded by all, including the majority of the educated few, outside this realm, as education for the never do well or drop-outs. Many persons wrongly ranked it among the lowest programme in Nigerians. This makes careers and training in vocational education to lack in glamour.

Table 2: A decline in the admission rate into Vocational and Technology Education Department (2018-2022)



The above wrong perceptions by various sectors of our society do not encourage adequate enrolment into this noble profession.

Inadequate Funding:

Poor funding of education in Nigeria is one of the major problems facing technical and vocational education and training. For instance, in the last six (6) years, out of a total annual budgets of the country which amounted to a total sum of (N55.30T) fifty five trillion, three hundred billion naira only that a total sum of N3.5trillion naira was allocated to education which is less than 10% of the total annual budget of the six years. Nevertheless, UNESCO has recommended that about 26% of budgetary allocation for developing nations should not fall below that bench mark. On the other hand, countries likeGhana and South Africa have increased their budgetary allocation to education to 23% and 16.7% respectively. Even if these countries have not reach the UNESCO bench mark but the evidence has shown that they mean well for their educational sector but in Nigeria we are below even 10%.

Table 3: Percentage of Annual Budget 2016-2022

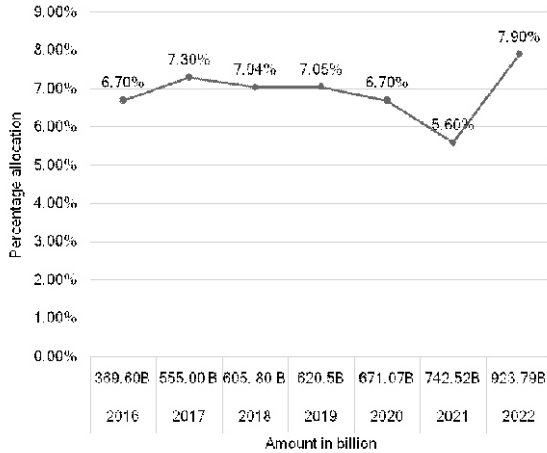


Table 4: Budget Allocation to Education 2016-2022 (Federal Government of Nigeria)

Year	Allocation (Billions)	Percentage
2016	369.60B	6.7%
2017	555.00 B	7.3%
2018	605.80 B	7.04%
2019	620.5B	7.05%
2020	671.07B	6.7%
2021	742.52B	5.6%
2022	923.79B	7.9%

Lack of Linkage between Industrial Demands with School Course Contents.

The course contents of TVET programmes in tertiary institutions in Nigeria lack a synergy between what the society and industries need to function effectively. This makes the graduates to be incapacitated, insignificant and abstract in knowledge content in the labour market while seeking for jobs. It

is pathetic to say that what a graduate possesses is not needed in the society, industries which make it irrelevant. Yakubu (2012), Akpan and Udoh (2014) opined that lack of productive and marketable skills has been identified as the major cause of unemployment as many Nigerian graduates are not adequately prepared to fit into the productive of the economy and cannot provide the services that can generate sustainable income.

LEARNING ENVIRONMENT

The role of the physical, social, psychological and organizational environment are of immense relevance in vocational and technical education programmes. It is noted that even oil companies also contribute heavily to the poor conditions of our environment which in turn affect the acquisition of vocational and technical education negatively. Dokubo, (1996) stressed the need for vocational educators to be much concerned about the quality of the learning environment for effective learning. Nzeneri, (2008) also affirmed that for teaching and learning effectiveness, the environment is expected to have essential physical facilities, appropriate social working conditions (i.e. conducive interpersonal relations). Appropriate learning conditions are essential for effective participation of the learners and their instructors and such environment should also be free from tension, fear or threat a situation that is free from ridicule.

Sex Roles Expectations

Sex roles expectation of the girl is also a factor inhibiting the smooth progress of TVET.

The gender of a child to a large extent influences the choice of vocation in many cultures, especially in Nigeria. Before the advent of western education in Nigeria, traditional education was practiced. Boys received training from their fathers in agricultural, blacksmithing and other masculine activities. Boys follow their parents as apprentices in performing family jobs such as hunting, farming, gold smiting or traditional medicine practice. Girls on the

other hand stay at home to prepare food, wash utensils and take care of little children. In schools, boys are encouraged to do the brain storming subjects like mathematics, physics and chemistry which are essential in most of vocational and technical education curriculum, they also engage in vocational jobs such as carpentry, welding work, brick laying etc which leads them to be innovative and creative and to make ends meet in Human capital Development: A Research Journal and contemporary Issues & Development, Vol. 4, Nos. 3, August, 2015.

In summary, some of the problems faced by TVET are; Lack of interest by the learners, low enrollment of students in TVE programmes, low admission into Vocational and Technical Education Department. The admission rate is declining yearly,

- Ill equipped workshops/laboratories
- Poor funding
- Policy summer suits by sorts
- Insecurity: This affects teaching/learning processes for instance, cult-related killings, kidnapping and communal clashes in various parts of the country constitute cogs in the will of progress of this noble programme.
- Youth restiveness attributable to unemployment. This is a big problem that confronts smooth running of this program because youth restiveness can destruct academic program of the learners. A typical example is a secondary school in my Local Government Area of the State where both teachers and students have been relocated to another location because of dangers to their lives and school properties.
- Low motivation rewards to lecturers, instructors etc. For maximum productivity and efficiency to be derived from man he needs to be rewarded and appreciated for work well done. At times when workers are not properly rewarded their productivity will surely come below the organizational set goals and objectives.

9.0 MY CONTRIBUTIONS TO SCHOLARSHIP AND PHYSICAL BUILDING CONSTRUCTION ACTIVITIES

The inaugural lecturer has over 60 publications that are visible online. He has contributed immensely to knowledge in terms research works, publication of books, lectures as well as producing numerous number of graduates and undergraduates students both in Ignatius Ajuru University of Education, Port Harcourt and Rivers State University, Port Harcourt. In the area of physical development of building structures

Consequently, my contributions to scholarship and educational development can be divided into three major parts:

1. Contribution to academic development young school-age children in Rivers State, Nigeria.
2. Physical building construction activities.
3. Contribution to research works.

Physical Building Construction Activities

The lecturer has contributed immensely in both in Rivers State Ministry housing as well as in this University. He was also a member of Rivers State Urban Renewal Committee between 1991--1993. He was also an active member of the Rivers State University Senior Staff Club Building/Special Projects Committee that laid the solid foundation of the 30- Room Guest House the Senior Staff Club of this University in 2017. Furthermore, He also contributed to the physical development of the College of Medical Sciences, Rivers State University Port Harcourt where he served as a Quantity Surveyor as well as a member of Rivers University Council Adhoc Committee on Physical Development of the College of Medical Sciences, Rivers State University Port Harcourt.

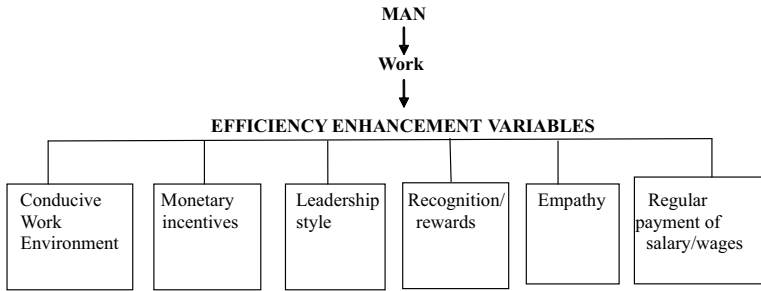
Contribution to Academic Development Young School-Age Children in Rivers State, Nigeria

In line with National Policy of Education which states that the overall philosophy of the nation's education should make education compulsory and right of every Nigerian irrespective of the gender, social status, religion, ethnic background and any peculiar individual challenges. It also states that access to education should be the right of any child in the nation irrespective of the child's economic, social and cultural background. The lecturer in contributing to the educational development of the nation has given free education to many less-privileged children from primary to secondary school level through the establishment of a private school which performs partly a non-governmental organization (NGO). Available records show that over hundred (100) children have benefited from the tuition-free arrangements of International Royal Academy, Port Harcourt. Hence, with this arrangement of helping parents who are not financially buoyant has given many children the opportunity to have access to education freely. The lecturer has also gone further in assisting some of these students to have access to tertiary institutions in Nigeria and some of the beneficiaries are in this university.

My Contribution to Research Works

Vice Chancellor Sir, permit me to inform my respected colleagues and audience that I have spent **31 years** in the service of Rivers State, Nigeria. I put in **13 post graduation years** in Rivers State Ministry of Housing and Urban Development where I rose to the rank of a **Senior Quantity Surveyor and 18 years** in the University as a **lecturer of Building Technology**. Hence, with this great wealth of experience in tertiary institutions as a lecturer and the experience I gained in physical building developments in building industry, I have observed that there are certain variables that can enhance and stimulate maximum productivity in a worker. Hence, a model about enhancement of workers' maximum productivity in building industry was postulated in 2021. That is **Efficiency Enhancement Model (Dokubo, 2021)**.

Table 5:
EFFICIENCY ENHANCEMENT MODEL (DOKUBO, 2021)



This model postulates that workers' productivity and efficiency can be stimulated by making the work environment conducive, in addition to other variables that can enhance productivity and effectiveness. From the table above these variables include; monetary incentives, leadership style, recognition/rewards, empathy and regular payment of salary/wages.

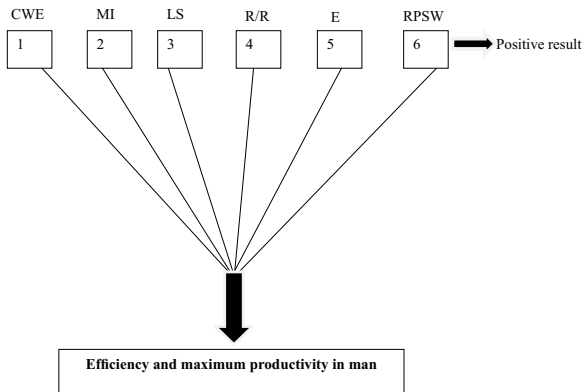


Figure 4: Efficiency and maximum productivity model.

Figure 4 shows that, if the above mentioned conditions are reinforced in work place, man will surely cherish **his beloved and Inseparable Twin (Vocation)**. Conversely, if any of the above mention variables is lacking in a

work place, man will never put his maximum efficiency and effectiveness. Consequently, Dokubo (2021) Model of efficiency enhancement agrees with the above McGregor theory Y, that states that if the right condition is put in place in a work environment, and in addition to the order aforementioned variables that can enhance and stimulate the effectiveness and productivity in man then, the positive result expected in average worker can be produced. In addition to that, average worker needs to be cherished, recognize and rewarded for the work well-done. The rewards can be monetary or other tangible object such as plaques, certificates, promotions, eulogy and accolade. Really, if the above mentioned variables are reinforced in work place, man will surely cherish his beloved and **inseparable Twin** called **Vocation**.

Vice Chancellor Sir, the essence a good leadership style in an organization cannot be over-stressed. It is an undeniable truth that the efficiency and the productivity in man can also be influenced if the leadership style of the manager/ management is empathetic as well as inclusive in nature. The stimulating effects of empathy in producing effectiveness and efficiency in a worker should not be overlooked. One of the seven habits of highly effective people is to, *“Seek first to understand, then to be understood”* (Covey, 2004). This means that we should learn how to **be swift to listening to others and slow to speak**. This rule helps in interpersonal relationship of workers in building industry and their employers, either the clients or the contractors.

9.1. Dokubo, I. N. (2021). A research was carried out about the Strategies to be adopted for Re-Orienting Vocational Technical Education for Sustainable Technological Advancement In Rivers State.

The study investigated the “strategies for re-orienting vocational and technical education for sustainable technological advancement in Rivers State “. The study was carried out in Rivers State. The study employed a descriptive survey research design. The population of the study was all lecturers in the three tertiary institutions in Rivers State which are 71 in total

Census sampling techniques were used; hence, the sample size of the study was 71 lecturers. The instrument used for the study was a self-designed questionnaire on a four-point rating scale. The instrument was validated and the reliability of the instrument was established using Cronbach Alpha which resulted in a 0.81 reliability coefficient index. Mean and Standard Deviation was used to analyze the research questions and hypotheses were tested using Analysis of Variance (ANOVA) at a 0.05 level of significance. The study found that promoting consistent usage of technical workshops, provision of adequate workshop equipment for practical works, assigning technology innovation to students no matter how small, utilization of collaborative instructional strategy amongst others are collective strategies for re-orienting vocational technology education for sustainable technological advancement in Rivers State. The major objective of the study was to determine the strategies for re-orienting vocational and technology education for sustainable technological advancement in Rivers State. In specific terms, the study sought to;

1. Determine the role of vocational and technical education for sustainable Technological Advancement in Rivers State tertiary institutions.
2. Determine the administrative strategies for re-orienting vocational Technology Education for Sustainable Technological Advancement in Rivers State tertiary institutions.
3. Determine the teaching strategies for re-orienting vocational Technology Education for Sustainable Technological Advancement in Rivers State in Rivers State tertiary institutions.

The following research questions were asked;

1. What is the role of vocational and technical education for Sustainable Technological Advancement in Rivers State tertiary institutions?
2. What are the administrative strategies for re-orienting vocational Technology Education for Sustainable Technological Advancement in Rivers State tertiary institutions?
3. What are the teaching strategies for re-orienting vocational

Technology Education for Sustainable Technological Advancement in Rivers State?

The study was carried out in Rivers State. The State is well known for massive oil exploration activities that been carried out in the geographical area. This activity attracted the presence of many vocational and technical organizations to the State. Consequently, vocational and technical education is a trending discipline in the study area. This, therefore, necessitated the choice of the area for the study. The study employed a descriptive survey research design.

Descriptive survey design is often employed when there is need for the researchers to describe situation by using the opinion of the population concern with the subject matter (Amadi, 2020). The population of the study was all lecturers in the three tertiary institutions in Rivers State namely, Rivers State university, Ignatius Ajuru University of Education, and Federal college of education technical Omoku. According to the departmental records and online sources (2020) there are 12, 26, and 33 vocational and technical education lecturers in RSU, IAUE and FCET respectively. Census sampling techniques were used; hence, the total population was engaged in the study. The sample size of the study was 71 lecturers. The instrument used for the study was a self-designed questionnaire titled “Strategies for re-orienting vocational Technology Education for Sustainable Technological Advancement in Rivers State (SRVTESTA)” The instrument was structured in a four-point rating scale of agreement (Strongly Agree-4, Agree-3, Disagree-2 and Strongly Disagree-1). Validation of the instrument was duly carried out by distributing to experts in vocational and technology education to scrutinize in terms of relevance, appropriateness, and adequacy of items. Reliability of the instrument was established using Cronbach Alpha which resulted to 0.81 reliability coefficient index. Mean and Standard Deviation was used to analyze the research questions and hypotheses were tested using Analysis of Variance (ANOVA) at a 0.05 level of significance.

RESULT AND DISCUSSION OF FINDINGS

Research Question 1: What is the role of vocational and technical education for sustainable technological Advancement in Rivers State tertiary institutions?

Table 1: Mean responses on the role of vocational and technical education for sustainable Technological Advancement in Rivers State tertiary institutions

S/N	Items	RSU=12		IAUE=26		FCET=33		Ave. Mean	Rmrk
1	Developing human resources towards current technology usage	3.65	0.56	3.40	0.63	3.76	0.33	3.60	Agreed
2	creation of skilled manpower in technology management and operation	3.54	0.64	3.59	0.53	3.68	0.53	3.60	Agreed
3	Enhancing the country's industrial productivity.	3.04	0.78	3.34	0.76	3.49	0.69	3.29	Agreed
4	Equipping learners with operational skills in technology	3.21	0.84	3.11	0.82	3.29	0.71	3.20	Agreed
5	Development of innovative technologies for workshop operation	3.67	0.64	3.60	0.43	3.52	0.84	3.60	Agreed
6	Dissemination of good sustainable development practice through the development of networks and partnerships between colleges and industries	3.21	0.83	3.66	0.54	3.63	0.66	3.50	Agreed
7	Engaging in in-depth research on technological operation and innovation	3.06	0.89	3.32	0.63	3.52	0.69	3.50	Agreed
8	Promoting external links with colleges in the developed countries	3.40	0.73	3.22	0.55	3.64	0.51	3.42	Agreed
9	Encouraging the procurement of sophisticated technologies from other nations	3.66	0.62	3.89	0.42	3.62	0.64	3.72	Agreed
10	enhancing student recruitment potential by providing evidence of responsible practice	3.82	0.32	3.39	0.51	3.89	0.33	3.70	Agreed

Field Survey, 2020

Table 1 presents the role of vocational and technical education for sustainable technological Advancement in Rivers State tertiary institutions. Based on the mean decision rule, items 1-10 were accepted by the three groups of respondents. This shows that the stated items are roles of vocational and technical education for sustainable technological advancement. This finding conforms with Magaji (2015) who observed that vocational and technical education system plays an important role in the economic, social and technological development of a nation because they are dynamic in nature. He further added that vocational and technical education training also has a substantial role to play in raising awareness, provision of skills, and values that are necessary to put sustainable development into practice. To support this, Dokubo and Dokubo (2014), noted that vocational and technical education has in its roles to give training and impart necessary skills leading to the production of craftsmen, technicians, and other skilled personnel who will be enterprising and self-reliant.

Research Question 2: What are the administrative strategies for re-orienting vocational Technology Education for Sustainable Technological Advancement in Rivers State tertiary institutions?

Table 2: Administrative strategies for re-orienting vocational Technology Education for Sustainable Technological Advancement in Rivers State tertiary institutions

S/N	Items	RSU=12		IAUE=26		FCET=33		Ave. Mean	Remark
11	Funding of the vocational-technical program	3.06	0.96	3.44	0.58	3.22	0.74	3.24	Agreed
12	Promoting consistent usage of the technical workshop	3.11	0.73	3.31	0.67	3.03	0.89	3.15	Agreed
13	Provision of adequate workshop equipment for practical works	3.22	0.70	3.10	0.83	3.31	0.59	3.21	Agreed
14	Recruiting skilled workshop instructors	3.30	0.64	3.00	0.96	3.03	0.96	3.11	Agreed
15	Encouraging fabrication of tools and equipment within technical workshop	3.01	0.94	3.08	0.84	3.20	0.84	3.10	Agreed
16	Enforcing the necessity of technological innovation among learners	3.23	0.73	3.32	0.63	3.21	0.70	3.25	Agreed
17	Assessing technical creativity of students before issuing the certificate	3.09	0.90	3.00	0.81	2.83	1.09	2.97	Agreed
18	Encouraging teachers' use of field trip for teaching and exposition	3.22	0.63	3.01	0.99	3.02	0.81	3.08	Agreed
19	Enhancing college partnerships with technical organizations	3.12	0.81	3.10	0.94	3.08	0.74	3.16	Agreed

Field Survey, 2020

14	Recruiting skilled workshop instructors	3.30	0.64	3.00	0.96	3.03	0.96	3.11	Agreed
15	Encouraging fabrication of tools and equipment within technical workshop	3.01	0.94	3.08	0.84	3.20	0.84	3.10	Agreed
16	Enforcing the necessity of technological innovation among learners	3.23	0.73	3.32	0.63	3.21	0.70	3.25	Agreed
17	Assessing technical creativity of students before issuing the certificate	3.09	0.90	3.00	0.81	2.83	1.09	2.97	Agreed
18	Encouraging teachers' use of field trip for teaching and exposition	3.22	0.63	3.01	0.99	3.02	0.81	3.08	Agreed
19	Enhancing college partnerships with technical organizations	3.12	0.81	3.10	0.94	3.08	0.74	3.16	Agreed

Field Survey, 2020

Table 2 shows administrative strategies for re-orienting vocational Technology Education for Sustainable Technological Advancement in Rivers State tertiary institutions. Based on the criterion mean value, items 11-19 had men responses beyond the criterion mean value. This implies that respondents agreed that item 11-19 are strategies administrators of vocational and technical education can put into play for re-orienting vocational technology education for sustainable technological advancement. The findings are in conformity with Mouzakitis (2010) who posited that the present curriculum content in TVET systems should primarily focus on enabling students to develop into productive, responsible people, well equipped for life and work in today's technology-based knowledge society. In support of this is Sinnott (2004) who in his study recommended curriculum screening and development of good practice in vocational and technical education, community projects: the establishment of new links between college and community groups to promote sustainable technology development and management.

Research Question 3: What are the teaching strategies for re-orienting vocational Technology Education for Sustainable Technological Advancement in Rivers State?

Table 3: Teaching strategies for re-orienting vocational Technology Education for Sustainable Technological Advancement in Rivers State

S/N	Items	RSU=12		IAUE=26		FCET=33		Ave. Mean	Remark
20	Assigning technology innovation to students no matter how small	3.00	1.06	3.04	0.98	3.10	0.90	3.05	Agreed
21	Utilization of collaborative instructional strategy.	2.91	1.12	3.01	0.90	3.03	0.94	2.98	Agreed
22	Taking students on a field trip to technical industries	2.86	1.20	2.60	1.01	3.31	0.73	2.92	Agreed
23	Concentrating a larger part of students' grading on their psychomotor ability	2.70	0.99	2.62	0.99	3.03	0.92	2.78	Agreed
24	Utilization of computer simulation during a lecture	2.91	1.09	2.78	1.03	3.20	0.80	2.96	Agreed
25	Exposing students to technological possibilities in developed countries	3.01	0.95	2.79	1.02	3.21	0.89	3.00	Agreed
26	Promoting technological innovations during students' final project	2.64	1.02	3.00	0.98	2.83	1.01	2.82	Agreed
27	Encouraging a fair grading system void of corruption	2.94	1.21	3.21	0.97	3.02	0.83	3.06	Agreed
28	Enforcing the use of instructional materials in teaching	3.04	1.04	3.10	1.01	3.08	0.83	3.07	Agreed

Field Survey, 2020

Table 3 shows teaching strategies for re-orienting vocational and technology Education for Sustainable Technological Advancement in Rivers State. Based on the mean decision rule, item 20-28 are accepted by the three groups of respondents as teaching strategies that can re-orientate vocational and technology education for sustainable technological advancement in Rivers State. The findings align with Onwenonye (2019) who noted that for vocational and technical education to be properly impacted in this modern world vocational teachers need to utilize students' center method of teaching. He further proposed that learners should be actively engaged in every subject to be learned in the program.

Hypotheses

- i. There is no significant difference in the mean responses of lecturers in RSU, IAUE, and FCET (omoku) on the role of vocational and technical education for sustainable Technological Advancement in Rivers State tertiary institutions.

Table 4: One-way Analysis of Variance on the role of vocational and technical education for sustainable Technological Advancement in Rivers State tertiary institutions.

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	0.185	2	0.092	1.736	.194
Within Groups	3.657	69	0.053		
Total	3.842	71			

Field Survey, 2020

Table 4 presents an analysis of variance on the mean responses of lecturers in RSU, IAUE, and FCET on the role of vocational and technical education for sustainable Technological Advancement in Rivers State tertiary institutions. The table reveals that the significant level of the p-value is 0.194 which is greater than the level of significance (0.05). Therefore, the null hypothesis was rejected. This implies that there is no significant difference in the mean responses of lecturers in RSU, IAUE, and FCET (Omoku) on the role of vocational and technical education for sustainable Technological Advancement in Rivers State tertiary institutions

- ii. There is no significant difference in the mean responses of lecturers in RSU, IAUE, and FCET (omoku) on administrative strategies for re-orienting vocational Technology Education for Sustainable Technological Advancement in Rivers State tertiary institutions.

Table 5: One-Way Analysis of Variance on the administrative strategies for re-orienting vocational Technology Education for Sustainable Technological Advancement in Rivers State tertiary institutions

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.014	2	.007	.367	.697
Within Groups	.455	24	.019		
Total	.469	26			

Field Survey, 2020

Table 5 presented the analysis of variance on the mean responses of lecturers in RSU, IAUE, and FCET on the administrative strategies for re-orienting vocational Technology Education for Sustainable Technological Advancement in Rivers State tertiary institutions. The table revealed that the significant level of the p-value is 0.697 which is greater than the level of significance (0.05). Therefore, the null hypothesis was rejected. This implies that there is no significant difference in the mean responses of lecturers in RSU, IAUE, and FCET (omoku) on administrative strategies for re-orienting vocational Technology Education for Sustainable Technological Advancement in Rivers State tertiary institutions

- iii. There is no significant difference in the mean responses of lecturers in RSU, IAUE, and FCET (Omoku) on teaching strategies for re-orienting vocational Technology Education for Sustainable Technological Advancement in Rivers State.

Table 6: One-Way Anova on the mean responses of lecturers on the teaching strategies for re-orienting vocational Technology Education for Sustainable Technological Advancement in Rivers State

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.223	2	.111	3.937	.073
Within Groups	.679	24	.028		
Total	.902	26			

Field Survey, 2020

Table 6 presented the analysis of variance on the mean responses of lecturers in RSU, IAUE, and FCET on the teaching strategies for re-orienting vocational Technology Education for Sustainable Technological Advancement in Rivers State. The table revealed that the significant level of the p-value is 0.073 which is greater than the level of significance (0.05). Therefore, the null hypothesis was accepted. This implies that there is no significant difference in the mean responses of lecturers in RSU, IAUE, and FCET (Omoku) on teaching strategies for re-orienting vocational Technology Education for Sustainable Technological Advancement in Rivers State tertiary institutions.

Based on the findings of the study, it was concluded that vocational and technical education has an essential role to play in sustaining technological advancement in any nation. Also, the study identified teaching and administrative strategies to be adopted in tertiary institutions for sustainable technological advancement in Rivers State. The study recommended among others that vocational and technical education administrators should facilitate the consistent use of project methods and field trips for teaching and learning in vocational education institutions this may aid innovation among students. The government should give much more preference to vocational and technical programmes in tertiary institutions, having known that vocational and technical education is essential for technological sustainability.

9.2 Dokubo (2019). The researcher carried a work titled Instructional Strategies for Improving Students Interests in the study of Block-laying and Concreting Trade in Government Technical Colleges in Rivers State.

This study was carried to determine the instructional strategies for improving student's interest in the study of block-laying and concreting trade in Government Technical Colleges in Rivers State. The population of the study comprised of 12 teachers in block-laying and concreting department and 15 administrators in government technical colleges in Rivers State making a total of 28 respondents. Since the population is small no sampling was done. A structured questionnaire tilted instructional strategies for improving student's interest in the study of block-laying and concreting trade in government technical colleges in Rivers State (ISISIBLCTGTCRS) was developed by the researcher and was validated by three experts from department of Industrial Technical Education Ignatius Ajuru University of Education. The reliability was determined using Cronbach Alpha which yielded a coefficient of 0.78. Data relating to the research questions were analyzed using mean and standard deviation while the t-test statistic was used for testing the hypotheses at 0.05 level of significance. The findings of the study revealed that demonstration of practical lesson by instructors using real or improvised equipment, the use problem solving method, use of instructional materials, allowing students to participate actively in the class by articulating their views on issues, asking and answering questions and effectively ask questions to arouse interest and curiosity are instructional strategies for improving student's interest in the study of block-laying and concreting in government technical colleges in Rivers State.

The study adopted a descriptive survey design. According to Nworgu (2005) a survey is a general procedure of collecting data from a selected sample of a population group through the use of questionnaire to describe the condition of the general population. The population of the study comprised of 12 block-laying and concreting teachers and 15 administrators students in government

technical colleges in Rivers State making a total of 27 respondents. Since the population is small no sampling was done. A structured questionnaire titled instructional strategies for improving student's interest in the study of block-laying and concreting trade in government technical colleges in Rivers State (ISISISBLCTGTCRS) was developed by the researcher. The instrument was validated by three experts from department of Industrial Technical Education Ignatius Ajuru University of Education. These experts' suggestions and corrections were used in modifying the instrument, to ensure that the items are clearly stated and appropriate for the stated research questions and hypotheses. The reliability of the instrument was established by administering a questionnaire to ten block-laying and concreting Teachers in Technical Colleges in Delta State and thereafter the reliability of the instrument was determined using Cronbach Alpha which yielded a coefficient of 0.78. This made the instrument to be considered suitable for the study. Data relating to the research questions were analyzed using mean and standard deviation while the t-test statistic was used for testing the hypotheses at 0.05 level of significance. For answering the research question, any item with a mean response of 3.50 and above was considered as agree while those below 3.50 were regarded as disagree. For testing the hypotheses, if the calculated significant valued (2tailed) is equal or greater than the 0.05 the null hypothesis will be accepted. If the calculated significant valued (2tailed) is less than the 0.05 the null hypothesis will be rejected

Research Question: What are the instructional strategies for improving student's interest in the study of block-laying and concreting trade in government technical colleges in Rivers State?

Table I: means score on the instructional strategies for improving student's interest in block laying and concreting trade in government technical colleges in Rivers State.

S/N	Items	Teachers			Administrators		
		\bar{x}	SD	Remark	\bar{x}	SD	Remark
		243					
1.	The demonstration of practical lesson by instructors using real or improvised equipment	4.00	1.16	Agree	3.73	1.03	
2.	The use of problem solving method	4.32	0.83	Agree	4.07	1.03	
3.	Use of instructional materials real or improvised	4.31	0.86	Agree	4.07	1.03	
4.	Allowing students to participate actively in the class by articulating their views on issues, asking and answering questions	4.31	0.86	Agree	4.27	0.88	
5.	Effectively ask questions to arouse interest and curiosity	4.54	0.52	Agree	4.47	0.52	
6.	Relating lessons to real life situations and students personal experiences.	4.46	0.52	Agree	4.40	0.51	
7.	Taking students out on excursions and field trips.	4.31	0.63	Agree	4.20	0.56	
8.	Adopting e-learning instruction technique will compliment in-person teacher instruction.	4.31	0.63	Agree	4.27	0.59	
9.	Using individualized instruction technique	4.23	0.60	Agree	4.27	0.59	
10.	Effective and constant supervision during individual and group projects.	4.08	0.64	Agree	4.20	0.68	
	Grand Mean	4.29	0.73		4.20	0.74	

The table above shows the mean score of teachers and administrators on the instructional strategies for improving student's interest in the study of block-laying and concreting trade in government technical colleges in Rivers State. The means scores of the teachers and administrators ranged from 3.75 to

4.54. The grand mean of teachers and administrators are 4.29 and 4.20 respectively. This means score exceeds the criterion mean of 3.5 indicating that both respondents agreed on all the items as the instructional strategies for improving student's interest in the study of block-laying and concreting trade in government technical colleges in Rivers State.

Research Hypothesis: There is no significance difference between teachers and administrators on the instructional strategies for improving student's interest in the study of block-laying and concreting trade in government technical colleges in Rivers State.

Table 2: independent sample t-test between mean scores of teachers and administrators on the instructional strategies for improving student's interest in the study of block-laying and concreting trade in government technical colleges in Rivers State.

Respondents	No	\bar{x}	SD	df	t-calc	Sig	Decision
Teachers	12	4.29	0.73	25	0.45	0.66	Accept
Administrators	15	4.20	0.74				

Source: Field survey 2019.

Table 2 above is the result of an independent sample T-test conducted to compare mean scores of teachers and administrators on the instructional strategies for improving student's interest in the study of block-laying and concreting trade in government technical colleges in Rivers State. The table shows that the mean of teachers are 4.29 with a standard deviation of 0.73. The mean of administrators is 4.20 and a standard deviation of 0.74, the calculated I value is 045. A Significant value of 0.66 was obtained. Since the significant value is greater than 0.05 the null hypothesis was accepted indicating that significant difference did not exist between the mean responses of teachers at-id administrators on the instructional strategies for improving student's interest in the study of block-laying and concreting trade in government technical colleges in Rivers State.

The result of Table 1 showed that respondents agreed with all ten items in the table. The study revealed that demonstration of practical lesson by instructors using real or improvised equipment, the use problem solving method, use of instructional materials, allowing students to participate actively hi the class by articulating their views on issues, asking and answering questions, effectively ask questions to arouse interest and curiosity, elating lessons to

real life situations and students personal experiences, taking students out on excursions and field trips, adopting e-learning instruction technique will compliment in-person teacher instruction, using individualized instruction technique and effective and constant supervision during individual and group projects are instructional strategies. The findings of the study is in harmony with Achounye and Ajoku (2002) who maintained that instructional materials stimulates interest and active participation of students. The findings of the study are in agreement with Obi (2003) who suggested that the use of improvised instructional materials and field trips as instructional strategies to improve student's interest. Therefore, teachers should always use instructional materials real or improvised ones in order to attract the interest of students in the study of block-laying and concreting trade. Teachers should be trained on the use of modern instructional materials and methods.

9.3. Dokubo I.N., Deebom M.T. & Obed O.O (2018). A Research About The Collaboration Between Technical Vocational Education and Training (Tvet) Institutions and Oil and Gas Industries For Tackling Skills Shortage In Niger Delta Carried Out By The Lecturer in Conjunction with Mtormabari T. Deebom and O.O. Obed. This is because Niger Delta region is characterized with dominance of oil and gas industries, which have contributed to the development of the region through skill development. This study examines the collaboration between technical vocational education and training (TVET) institutions and oil and gas industries for tackling skill shortages in the Niger Delta Region.

Two research questions were raised to guide the study. The study adopted a co relational and descriptive research survey design. The sample for the study comprised 81 lecturers/instructors and 52 oil and gas workers, which were

carefully selected through multi stage stratified sampling technique. The instrument for data collection was a self-structured questionnaire tagged “Technical institutions collaborating with Oil and Gas industries for Skills Shortage (TICOGISS and data were collected by the researchers. A reliability coefficient 0.88 was established for the study through the split-half method. The study revealed that provision of training equipment, training and retraining of TVET personnel, absorption of TVET students for industrial attachment, provision of adequate fund and provision of training workshops to TVET institutions are some of the roles of oil and gas industries in tackling skills shortage in Niger Delta and hence a positive relationship exists between oil and gas industries and TVET institutions in Niger Delta.

Means and standard deviation statistic was used to analyze research question 1, while z-test was used to test hypothesis one (H₀) at 0.05 level of significance. Mean values equal to 3.00 and above were accepted while mean values below 3.00 were rejected. Also, it was decided that where the z-calculated value was equal or greater than the table z-value, it indicates significant difference; hence the null hypothesis is rejected; but if otherwise, the null hypothesis is accepted. Research question two was analyzed, using regression analysis. All statistical analyses were performed with (SPSS) software.

Results and Discussion of Findings

Research Question 1: What are the roles of oil and gas industries for addressing skills shortage in Niger Delta?

Table 1: Respondents Opinion on Roles of Oil and Gas Industries for Skills Shortages

S/N	Roles of Oil and Gas Industries for Skill Shortages	Lectures/Instructors		Decision	Oil & Gas (Workers)		Decision
		\bar{x}_1	SD ₁		\bar{x}_2	SD ₂	
1.	Provision of training equipment.	3.56	0.89	Accepted	3.63	0.79	Accepted
2.	Training of TVET students on modern TVET skills.	3.63	0.79	Accepted	3.17	1.21	Accepted
3.	Provision of instructional material.	3.55	0.84	Accepted	3.43	0.95	Accepted
4.	Training and retraining of TVET personnel.	3.58	0.83	Accepted	3.36	1.07	Accepted
5.	Giving of academic scholarship to students.	3.67	0.77	Accepted	3.53	0.92	Accepted
6.	Provision of training workshops.	3.61	0.81	Accepted	3.36	1.01	Accepted
7.	Absorption of TVET students for industrial training (IT period).	3.56	0.89	Accepted	3.53	0.92	Accepted
8.	Provision of adequate fund.	3.54	0.90	Accepted	3.59	0.85	Accepted
9.	Reviewing of TVET curriculum to capture relevant skills in oil and gas industries.	2.21	0.88	Rejected	2.78	0.86	Rejected
10.	Identifying skills needed in oil and gas industries.	3.58	0.89	Accepted	3.61	0.82	Accepted
	Average	3.45	0.85	Accepted	3.39	0.94	Accepted

Source: Researchers' Field Data; 2017

Table 1 result shows that the respondents accepted all the items as roles of oil and gas industries for addressing skills shortage in Niger Delta. This was reiterated in their average mean of 3.45 and 3.39 for TVET institutions and oil and gas workers respectively. However, the respondents unanimously rejected item 9 that reviewing of TVET curriculum is not a role of oil and gas industries.

Research Question 2: what is the relationship between TVET institutions and all and gas industry for addressing skills shortage in Niger Delta?

Table 2: Relationship between TVET institutions and oil and gas industries in addressing skill shortages in Niger Delta

Group	R	R ₂	Adjusted	STD Error
TVET Institutions	0.159	0.025	0.021	5.240
Oil & Gas Industries	0.362	0.131	0.128	4.948

Source: Researchers' survey; 2017.

Table 2 reveals that the relationship between TVET institutions and oil and

gas industry is 0159 and the variance contribution of TVET institutions and oil and gas industries to the dependent variable as measured by adjusted R square is 2.1 percent, which shows that it is not contributing significantly to the dependent variable measure.

Hypothesis Testing

H_{01} : There is no significant difference in the mean ratings of oil and gas workers and TVET institutions instructors on the roles of oil and gas industries for addressing skills shortage in Niger Delta.

Table 3: Z-test Analysis of Respondents on the Roles of Oil and Gas Industries

Group	Mean	SD	N	df	z-cal	z-crit	Decision
Lecturers Oil and Gas Workers	3.45 3.39	0.85 0.94	81 52	131	132	1.960	Accepted

Source: Researchers survey; 2017.

The table result shows that there is no significant difference in the mean rating of lectures oil and gas workers on the roles of oil and gas industries in addressing skill shortage in Delta. Since the Zcal (1.32) is less than the Zcrit (1.960), the hypothesis was accepted.

The results in Table 1 reveal that provision of training equipment, absorption of TVET s for industrial training (IT), provision of training workshops to TVET, training and retr' TVET personnel and so on are some of the roles of oil and gas industries in tackling short TVET skills in the Niger Delta Region.

The finding is also in agreement with Ayomike (2015) who opined that retraining of teachers and instructors on oil and gas courses, establishment of training centres across nations are the roles of oil and gas industries operating in the Niger Delta Region. The finding in Table 2 revealed that there is low relationship between TVET institutions and gas industries in tackling skill shortages in the Niger Delta Region of Nigeria.

Based on the findings of the study, the following recommendations were made; Oil and gas industries should establish various skill acquisition training centres. Employment in oil and gas industries should be based on skills acquired so that oil and gas industries will see the need for collaboration in TVET skills. Graduate trainees from various TVET institutions should be considered for employment immediately after their training. Oil and gas industries should provide training equipment to TVET institutions to enhance effective training on skills. The industries should partner to fund the institutions by providing facilities such as training workshops and so on.

Summary/Conclusion

Vice Chancellor Sir, in accord with the **Template for Rivers State University Inaugural lectures (2022)**, that states among other things that;

- Inaugural lecture is an occasion for newly promoted professors to inform the University community and the public about their areas of specialization, recent and future research.
- It is an avenue to identify and close knowledge gaps using research knowledge acquired to solve the problem.
- Also, a professor who has not presented an inaugural lecture cannot deliver a valedictory lecture.

Today, I am glad to inform my reputable audience made up of eminent Professors and scholars, that, I have paid the debt I owe the university as a professor by delivering this inaugural lecture today. Hence, by God's grace the University will give me the authorization to deliver my valedictory lecture during my retirement period.

Man and Vocation as Inseparable Twins has been adequately presented. Proofs from Nature which show that man is a twin brother of vocation have been fully deliberated. Certainly, man and vocation are joined together by nature as twins. The grand Creator of man has endowed in man with **Cognitive and psychomotor domains** that make vocation to be intrinsic in man. Consequently, man should use his psychomotor domain by making use of his hands to learn, acquire skills and physically performs the skills that he has acquired.

The historical background of technical and vocational education and training(TVET) also indicate that before the advent of western education in Nigeria, that our traditional education encouraged the development of a child's physical and mental skills. This was aimed at developing a self-reliant adult who can manage well his daily circumstances. The lecture also indicated that acquisition of a specific vocational training and development

of a healthy attitude towards an honest labour were included in the oral pedagogy of the traditional education which our forefathers had before the introduction of Western education in Nigeria. Further, traditional education system also provides opportunities for the young learners to acquire knowledge and skills in the local crafts available in the communities. The local crafts and trades included carpentry, weaving, blacksmithing, basket-making, net making, boat making, sculpturing and this history proves that the acquisition of vocational skill is as old as man.

From the lecture, it was gathered that Vocational education is generally practice-oriented both in principles and practice. From the foregoing description of vocational education programmes, it could easily be deduced that every vocational education programme, especially those that focus on vocational skills acquisition, should have the objective of making people more self-reliant and skillful, whether as self-employed or employed by someone else. In addition, Vocational education is the ability to use one's skills advantageously. The issue of vocational education programmes as a means for economic empowerment and rural transformation in Rivers State, Nigeria has been profoundly addressed. Since vocational education is closely linked to economic empowerment and rural transformation, it is therefore imperative that the designers of these noble programmes should plan them to enable the trainees acquire skills necessary for employment, self-reliance and community development.

Vice Chancellor Sir, it is worthy to state that the inaugural lecturer has contributed enormously to knowledge in terms of research works, publication of articles in journals and as well as publication of books. My contributions also includes quality lectures given to both graduates and under graduates students, in addition to producing numerous number of graduates and undergraduates students both in Ignatius Ajuru University of Education, Port Harcourt and Rivers State University, Port Harcourt. In the area of physical development of building structures, the lecturer contributed massively in both in Rivers State Ministry of housing and Urban

Development between 1991 and December 2004 as well as in this University from 2017 till today. Furthermore, the contribution to academic progress of young school-age children in Rivers State, Nigeria is another area where the lecturer has contributed immeasurably by giving some less-privileged school-aged children the opportunity to have free access to school irrespective of their gender, social status, religion, economic, cultural and ethnic background. The lecturer in contributing to the educational development of the nation has given free education to many less-privileged children from primary to secondary school level through the establishment of a private school which performs partly as a non-governmental organization (NGO).

Conclusively, the problems plaguing education in Nigeria was alsodiscussed.In summary, some of the problems are;Lack of interest, low enrollment, poor equipped workshops/laboratories, poor funding, policy summer suits by sorts, un-conducive learning environment, insecurity, youth restiveness attributable to unemployment etc.

Recommendations

Finally, the lecturer has made some suggestions that will help man to appreciate the importance of doing physical work and at the same time enjoy the fruitage of his labour. Man must work because man and vocation are inseparable twins. Consequently, the following under listed recommendations will help man to refocus his attention to technical skills acquisition.

1. **No work no eat policy** should be adopted and indolent ones should meet

lower creatures like the **ants** for lectures and tutorials. This will ultimately help them to be industrious and productive.

2. The Federal Government of Nigeria should increase the funding of education to be in line with the UNESCO recommendation of about 26% of the country's annual budget of the developing nations. Presently, Nigeria's budget for education for the last six years had not reached up to 10%. On the other hand, the funding of TVET programmes can also be contributed by private industries, public industries, public-private partnership (PPP), non-governmental organizations, philanthropists etc. This will enhance provision and acquisition of infrastructural facilities which will help to make the graduates competent and complete in knowledge, skills, attitudes and value.

3. Rivers State University is fervently implored to assist our department by giving more publicity about the value of Technical and Vocational Education Programmes in order to improve its relevance and image to the public. This will ultimately encourage more learners and youths to enroll into these noble programmes because the acquisition of these skills will help them to be self-reliant. This passionate appeal is necessary because current admission records as shown above indicate that Vocational and Technology Educational department for the past four years had recorded a sharp decline in the admission rate of students into this department.

4. Emphasis on paper qualifications should be de-emphasized and instead more attention should be placed on technical skills of the applicants

during employment processes and in the time of scholarship awards.

5. Dokubo's model of enhancing efficiency in workers should be adopted in order for optimum productivity in man to be realized.

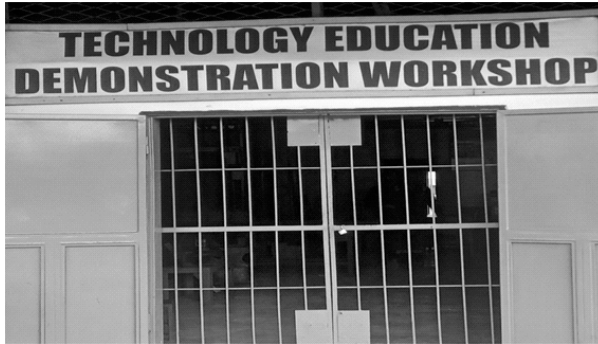
6. All lecturers who have not yet acquired a certificate in education should do so and register with Teachers Registration Council of Nigeria (TRCN) in order to enhance their teaching strategies and skills. This is necessary because it is only in educational industry that the raw material is man, the processing machine is man and the finished product is also man.

7. TVET curriculum should be designed and patterned after the needs of the society and industries by education policy makers, administrators and planners. This will make transition from school to the labour market attainable rather than theoretical alone.

8. The learning environment should be provided with essential physical facilities and appropriate social working condition that are free from tension and dangers to the lives of the participants and properties. The environment should be free from ridicules, but learner-friendly and attractive so that the learners may not quit the learning programmes.

9. Technology education demonstration workshop should be upgraded to be in line with the current realities. Modern equipment and

machines should be provided in the workshop in order to facilitate the inculcation of technical skills to the learners.



THIS DEMONSTRATION WORKSHOP NEEDS MODERN FACILITIES THAT WILL ENHANCE TEACHING AND LEARNING ACTIVITIES.

Plate 16: Innear view of the workshop

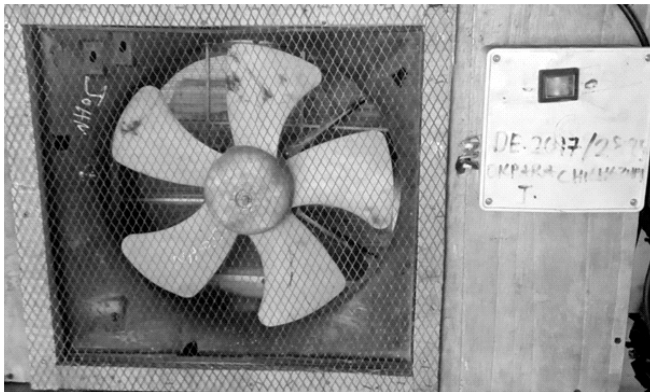


PLATE 17: Hot air extractor fabricated by a VTE student. This shows that if the workshop is properly equipped, the products from the workshop will contribute greatly to the internally generated revenue of this University.

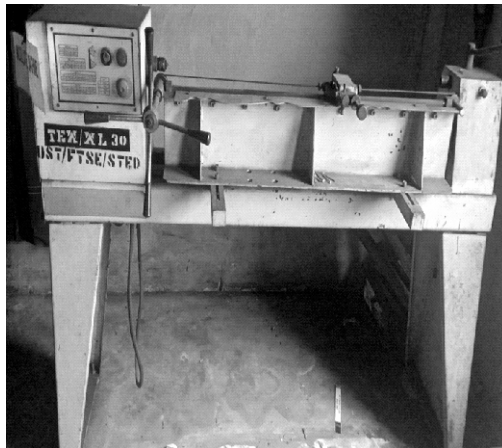


Plate 18: An obstinate machine to be refurbished

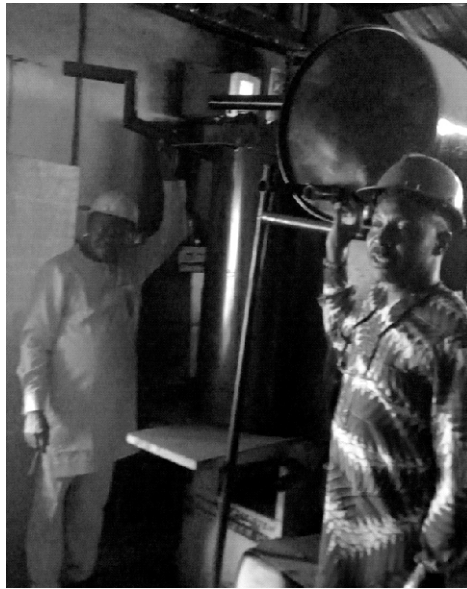


Plate 19: A modular refinery constructed by TVET students in VOTECH Demonstration workshop, RSU Port Harcourt

Vice chancellor sir, if the government, tertiary institutions and all the stakeholders in education can honestly adopt and apply the above recommendations, truly man will surely redirect his attention to his twin which is vocation. As a result, Rivers State University Nkpolu-Oroworukwo Port Harcourt will fully achieve its cardinal objective which is a **CENTRE for EXCELLENCE and CREATIVITY.**

ACKNOWLEDGMENT

I am grateful to some persons who have in one way or the other made significant contributions to my education and academic prowess. First, I thank and praise the Almighty God Jehovah for everything He has done for me and my family, hence, "You are worthy, Jehovah our God, to receive the glory and the honour, and the power, because you created all things and because of your will they came into existence and were created".

I wholeheartedly appreciate our amiable Vice Chancellor, Professor Nlerum S. Okogbule, a legal luminary, an intelligent administrator, a humble and empathetic leader for giving me this unique opportunity to present this inaugural lecture. I am also grateful to the Deputy Vice Chancellor (Administration), Professor N.S Okoroma and Prof V.B. Omubo-Pepple the Deputy Vice Chancellor Academic and my beloved friend. I also appreciate the Registrar of the University, Dr. Sydney. C. Enyinda for being present here today.

I wish to express my profound gratitude to Prof. N. Hudson Ukoima, the Chairman, Senate Lectures Committee and other members of Senate Lectures Committee –Prof. Jones M. Jaja, Prof. N.H.A. Nwafor and Prof. John Ohaka and their Secretary, Mr. T.E Egbuchu. My appreciation goes to my beloved Prof. I.K.E. Ekweozor because of for his immense supports and his fatherly care to me. I must appreciate our beloved father in Faculty of Education Prof. Wey A. Amaewhule for being with me always.

My profound gratitude goes to Prof. Blessing C. Didia former Vice Chancellor, Rivers State University, Port Harcourt and his lovely wife Lady P.C. Didia for their immense contributions toward my academic growth as well as making this inaugural lecture to be a success. My special appreciation goes to Barr. Mrs. Bibian N.S. Okogbule for her humble, amiable and motherly role she displayed in making this Inaugural Lecture a big success. My immense gratitude goes to my bosom friend, my name sake, Erudite Prof

and the University Orator, Prof. Isaac Zeb-Obipi for his huge supports in making this occasion a huge success.

My special gratitude goes to Prof. Prince Chinedu Mmom, the Hon. Commissioner of Education, Rivers State, for your supports and physical presence. I also appreciate the present of the Vice Chancellor of Ignatius Ajuru University of Education Prof. Okey Onuchukwu who despite his crowded programmes made it possible to be here. I owe an unquantifiable amount of appreciation to my beloved brother and friend, (Eze), Dr. Barr. Sam Kalagbor, the Rector, Capt. Elechi Amadi Polytechnic Port Harcourt for identifying with me always.

I must be grateful to Senator Andrew Uchendu, (OON, NPON) Pro-Chancellor and Chairman Governing Council, University of Port Harcourt Choba for the unquantifiable amount of help he and his elder brother, Elder Roland. E. Uchendu rendered to me during my under graduate programme between 1985 and 1987. It is an unforgettable fact that Senator Andrew Uchendu's contributions to my academic prowess cannot be overlooked this is because of the supports he gave to me during my undergraduate studies in Rivers State University of Science and Technology Port Harcourt (1984 - 1989). I will also appreciate and acknowledge the helps rendered to me by Chief W. J. Wocha, M.D. Safari Hotels Limited, Chief Dr. S. O. Ovuah (JP) and Mrs. Rhoda Okparaku, M.D Unniny Restaurant UNIPORT during my undergraduate study programme. My immense gratitude also goes to Chief S. N. Ohaka for his fatherly love and help in making this lecture a success and I am also grateful to Chief and Eze Mike Ejims Enwukwe for his physical presence and supports.

My special appreciation goes to Professor Chituru G. Orluwene and his beloved wife for their love, loyalty and supports to me constantly. My gratitude goes to Dr. Friday Aaron, the CMD RSUTH, Hon./ Dr. Thomas Bariere, the Executive Chairman, Khana LGA, Prof. J. B. Vipene, Dean, Faculty of Education and Mrs. Theresa Owem Uchendu for their wonderful supports. I appreciate the Chief of Staff Rivers State Government House,

Chief/Engr. Chukwuemeka Woke and entire members of Uvuawhu Workers Association RSU for their wonderful supports. I acknowledge all members of GSS Emohua old students Alumni association for finding it worthy to be here. I appreciate all the representatives of Omerelu Community (Wome and Didia families -- my inlaws), Dokubo Nwojiewho family, Omuobizuvillage, Omu-Orji family Omuobizu, Ogbelegba village and the entire Uvuawhu clan for being present here despite your crowded activities. My immense gratitude goes to all my brothers and sisters for their various supports. I am also grateful to Prof. (Eze) S.N. Nweke, Nyenwe-Ali Igwuruta Community, HRH Eze Collins Ogwu, Nyenwe Eli - Rukpokwu Community, Mr. & Mrs. Wichendu Obi, Barr. Ikem Adiele, Dr. Ajie Chinonye, Mr and Mrs. Ndubuisi Wome and Mr. O.S. Ofuru my principal who mentored me in GSS Emohua for their supports.

I am also grateful to the following distinguished persons who have made out time to honour my invitation – Prof. S.N. Owhonda, Prof. Onyema J.I. Dean Social Science, Prof. S.W. Amadioha, Prof. S. N. Amadi, Prof. Simeon E. Weli, Prof. Nwabueze Ebere, Prof. H. A Igoni, Prof. Maxwell D. Eremie, Prof. Agwor ThankGod, Prof. Amadi Eleanor., Prof. Agi Comfort W., Prof. A.U. Nnodim, Prof. Emejuru C., Prof. P.C. Okwelle, Prof. Akujuru Victor, Prof. S.T. Puyate, Prof. J.C. Imegi, Prof. Williams James Ubulom, Prof. Ede P. N., Prof. Adolphus Joseph Toby, Prof. V.A. Asuru, Prof. (Mrs.) N.P. Okpokwasili, Prof. P.C. Sett Accra-Jaja, Prof. (Mrs.) Blessing E. Ahiazu, Prof. Timothy Epidi, Prof. Isaac Ogundu, Prof. N.S. Nzeneri, Prof. C.K. Wachukwu, Prof. M.J. Ahiakwo, Prof. Eric. C. Amadi, Prof. M. N. Koko, Prof. (Mrs.) M.E. Akpomi, Prof Donald I. Hamilton, Prof. S.W. Amadioha and Prof. Fred Amadi. I wish to render my sincere thanks to Dr. Sampson O. Wagbara for his immense supports. My gratitude also goes to Mrs. Constance Odimabo, former Registrar of this University for your motherly care and supports.

I must also appreciate all my colleagues in the Faculty of Education who made this occasion to be a huge success because time will fail me if I start to

enumerate your names one by one. Some of them are Dr. Daraego Taylor, Dr. Soromadu B. Nlebem, Dr. Patrick Igharo, Dr. Tambari M. Deebom, Dr. Legborsi Nwinne, Dr. H.L. Deekor, Dr. Martha Azuonwu, Dr. Joy Amesi, Dr. Chris O. Ikpesu, Dr. (Mrs.) O.T. Amie-Ogan, Dr. Isaac E. Obillor, Dr. (Mrs.) Joy Agumagu, Dr. Adolphus Telema, Dr. (Mrs.) Gladys Aleru, Dr. S. L. Aziaka, Dr. Dagogo Alu Long-John, Dr. Nyema Wogboroma, Deacon Emmanuel Ikwut, Dr. Hillary Wordu, Dr. Kenneth Amadi and all members of the Department of Vocational and Technology Education, Rivers State University, Port Harcourt for your huge supports.

I also appreciate, Mr and Mrs Uche Njoku Woji, Mr. Graham C. Woji, Mr. and Mrs. Ernest .A. Awute. Mr. & Mrs. Augustine James, Pastor L.O. Didia, , Members of RSU Club, Members RSU ASUU, members of RISUWA, Dr. Chijioke Mandah, Chief/ Ohna A. O. Mandah, Mr. Friday Mandah, Mr and Mrs. Ejikeme C. Amadi, Dr./ Chief. Dominic Azuokwu, Uvuawhu DevelopmentGroup and Iwhuruoha in FOE for their supports and encouragements.

I appreciate all the staff of this Great University and members of all Faculties in this University for identifying with me. My gratitude goes to all my former colleagues from Ignatius Ajuru University of Education who constituted a formidable committee of friends for your immense supports and contributions toward the success of this occasion. May God reward you all for the selfless supports you gave to me.

I am grateful to all the Staff of ISS Rivers State University who honoured this occasion. I am grateful to all Undergraduate and Post Graduate students of Faculty of Education and of the entire University for your selfless supports and encouragements. I appreciate the efforts of my secretary Rachael Mbata for assisting me in the typing of this work. I also thank Mr. Chigozinum T. Woji, Mr. Jared Chinuru and Jehu Orji for their efforts. My special thanks goes to all my good staff in DC. International Royal Academy Rukpokwu for their hard works and encouragements. I also appreciate the effort of Mrs. Chinyere C. Wosu, Dr. (Mrs.) Uchechi Ngozi Wosu, Mr. Arthur Amadi, Mr.

Christian Obazee for their huge supports and encouragements.

I will also remain grateful to all members of my Committee of Friends ably headed by Dr. Okiridu Obulord, Dr. Chibuike Egbunefu, Dr. Gladys Aleru and host of others too numerous to mention for your huge financial supports, prudent management, logistics and encouragements. May Jehovah God bless and reward you all for selfless efforts.

I appreciate my children - Engr. Ovundah Isaac-Dokubo, Chivuikem Isaac-Dokubo, Mrs. Chivuruoma Nwankpa (Nee- Isaac-Dokubo), Nwenendah Isaac-Dokubo, Chimnasanum Isaac-Dokubo, Mrs. Melody Legia Isaac-Dokubo (my beloved daughter in-law) and my baby girl, Chimgozirim Isaac- Dokubo for their constant supports during the preparation of this inaugural lecture. I express my deepest appreciation to my beautiful beloved wife and her inseparable, beloved and beautiful twin, Dr. Mrs. Ebere Sampson Wagbara for their maximum love, care and encouragements given to me in making this Inaugural Lecture a huge success.

Thank you all.

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